

The facility is proposing that the following material be supplied to the candidates taking the written examination:

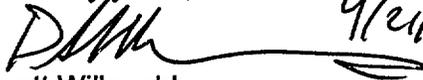
- 1) Emergency Action Level Classification Chart
- 2) Steam Tables
- 3) Technical Specifications minus definitions, safety limits, bases, and administrative section.
- 4) EOPs minus Entry Conditions
- 5) Calculator
- 6) M-227 Sheet 1, Rev. E54 and Sheet 2, Rev. E43 (Containment Atmospheric Control System)
- 7) PNPS 2.1.14, Rev. 48 Page 34 of 40 (Power to Flow Map)
- 8) EP-IP-400, Rev. 7, Page 11 of 16 (Protective Action Recommendation Process)
- 9) PNPS 2.2.80, Rev. 21, Page 57 of 59 (Fuel Zone Instrument Density Compensator Aid)
- 10) NOP98A1, Rev. 4, Page 42 of 62 (Procedure Control Form)
- 11) PNPS 2.4.143, Rev. 20, Page 74 of 82 (Curve 1 – RPV Saturation Pressure)

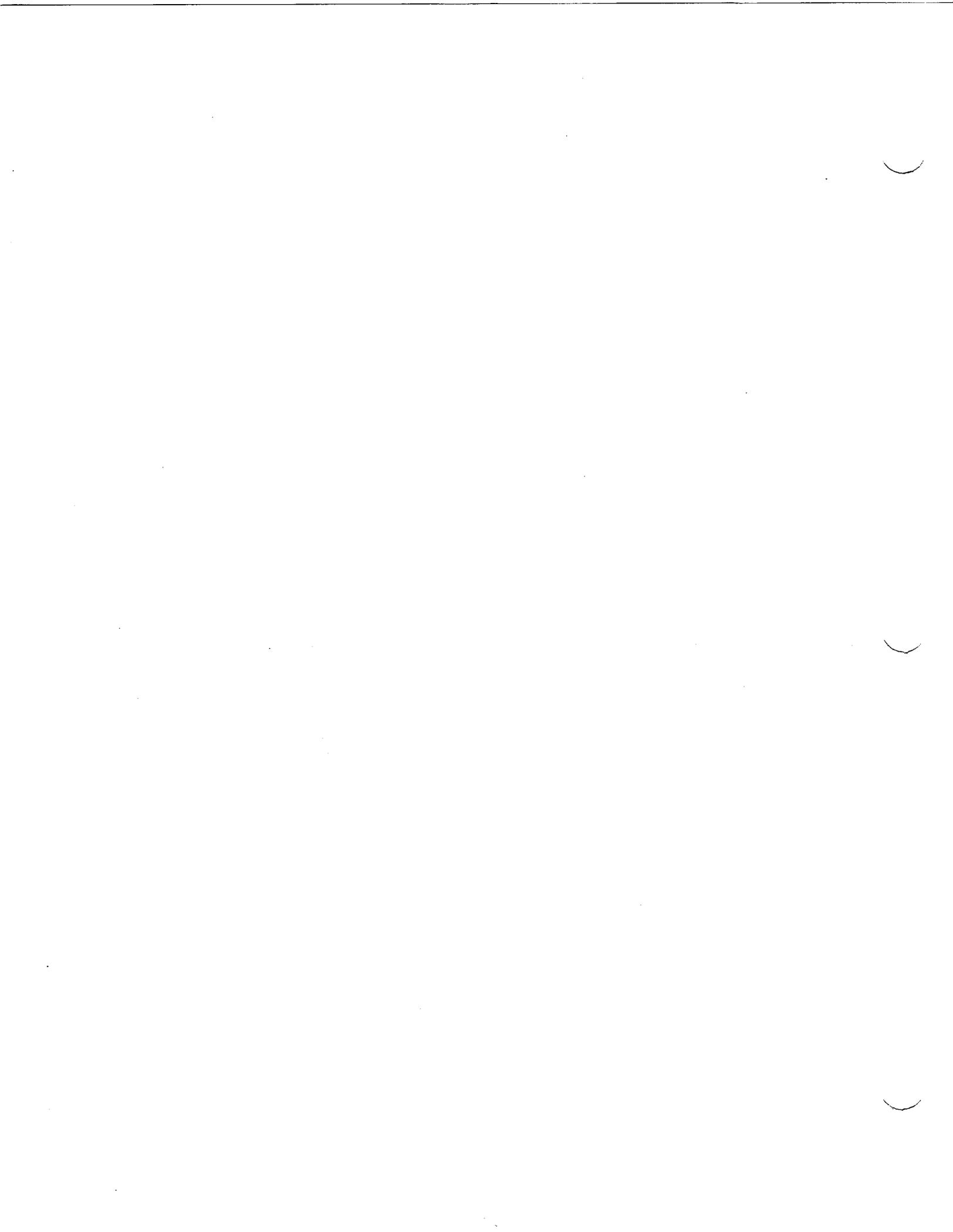
Per ES-201 Attachment 1, regarding exam security, I would request that the enclosed materials be withheld from public disclosure until after the examinations have been completed.

This examination has been developed in accordance with the Draft Supplemental Guidance to Revision 8 of NUREG-1021.

If I can provide any additional assistance, please feel free to call Rich Bolduc at (508) 830-7658 or myself at (508) 830-7638.

Sincerely yours,

 9/21/00  
Scott Willoughby  
Senior Facility Representative



# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 1

Question: With grid voltage steadily lowering, the control room initiated a reactor scram. When the reactor was scrammed, a loss of feed occurred.

- Reactor water level dropped off of the narrow range instruments about 4 minutes after the scram, and stabilized at -60" due to feed from CRD.
- Fifteen minutes after the scram, reactor pressure was stable at 900 psig and controlled with SRVs.
- Grid voltage stabilized, and A-1 thru A-6 were energized from the SUT with bus voltages of 3700 volts.

The reactor operator just reported the CRD pump has tripped and will not restart. This is because:

- a. the CRD pump has been operating at near minimum flow since the scram, resulting in the pump overheating and associated bearing damage.
- b. the suction filter clogged due to operating at high flows causing the CRD pump to trip on low NPSH.
- c. the prolonged low voltage condition has caused a loss of voltage trip of the Startup Transformer feeder breaker to bus A-5.
- d. a diesel generator load shed has occurred resulting in the CRD pump being tripped and prevented from restarting.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 1

Reference: Emergency AC Distribution Ref. Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295003AK1.02 (3.4)

CFR: 41.5

License Level (R/S/B): R

Question Level: C

Question Source: Bank #3934

Lesson Plan: O-RO-02-09-08

Objective: EO-6

Justification: 11 minutes after level reached -46" causing a LOCA signal, ECCS pump start, and a load shed. For given conditions a, b, c, plausible.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 2

Question: During a plant startup, a turbine roll is in progress. A startup transformer lockout actuates. For this situation, Group II isolation valves immediately automatically close due to loss of power to:

- a. A1 and A2 only.
- b. A3 and A4 only.
- c. A5 and A6 only.
- d. A3 and A6 only.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 2

Reference: PNPS 5.3.18, Loss of Y3, PNPS 5.3.19, Loss of Y4

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295003AK3.06 (3.7)

CFR: 41.9

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-09-08

Objective: EO-6

Justification: Loss of power to Y3 and Y4 immediately initiates valve isolation (via A5 and A6). Loss of A1 and A2 would cause loss of feed. Loss of A3 and A4 would cause a loss of power to the RPS MG sets. Losing the MG sets would cause a loss of power to the RPS buses after a time delay resulting in a Group II isolation. Loss of A3 and A6 plausible because A3 supplies 'A' 120V RPS MG set and A6 supplies Div. II safeguards bus (Y4).

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 3

Question: The reactor is operating at 72% power and 40 Mlbs/hr with the 'C' reactor feed pump tagged out of service. The 'A' RFP suddenly trips. With no operator action, the reactor (1) \_\_\_\_\_ scram and final reactor recirculation pump speed will be (2) \_\_\_\_\_ :

Note: Refer to the provided Power to Flow Map

- a. (1) will  
(2) 26%
- b. (1) will  
(2) 44%
- c. (1) will not  
(2) 26%
- d. (1) will not  
(2) 44%

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 3

Reference: PNPS 2.1.14 Station Power Changes Power/Flow Map, 2.4.49, Condensate and Feed Ref. Text

Exam Reference  
Provided To Candidate: Power to Flow Map

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295006AA1.02 (4.0)

CFR: 41.7  
License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #410

Lesson Plan: O-RO-03-04-11(01)

Objective:

Justification: A recirc runback to 44% would have little affect with the given conditions. A single RFP does not have sufficient capacity for 72% power. After the scram, recirc pumps will runback to 26%, therefore 'a' is correct.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 4

Question: When scrambling the reactor with no power to Y-1, the turbine must be manually tripped in order to:

- a. reduce the rate of main condenser vacuum lowering.
- b. prevent turbine damage caused by reverse powering the main generator.
- c. expedite removal of the turbine from service since turbine supervisory instrumentation is de-energized.
- d. force the fast transfer of A5 and A6 to the startup transformer.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 4  
Reference: PNPS 5.3.7, Loss of Y1  
Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295006AK3.05 (4.0)

CFR: 41.5  
License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-05-04  
Objective: EO-17f

Justification: Loss of Y1 prevents auto tripping of the turbine following a scram. Operator is required to manually trip the turbine which disconnects generator from the grid to prevent reverse powering the generator. Reverse powering the generator causes turbine damage by spinning the turbine without steam flow which overheats the LP turbine blading.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 5

Question: Post scram with MSIV's closed, reactor pressure is 925# and lowering slowly.

HPCI is in full flow test with the full flow test valve (MO-2301-10) full open and the flow controller in automatic and set at 3000 GPM. Reactor pressure is slowly lowering.

Stabilizing reactor pressure would require:

- a. raising the auto flow setpoint on the flow controller.
- b. lowering the auto flow setpoint on the flow controller.
- c. shifting the controller to manual and lowering the manual setpoint .
- d. jogging the full flow test valve in the closed direction.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 5

Reference: PNPS 2.2.21.5 HPCI Injection and Pressure Control

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295007AA1.02 (3.7)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #4942

Lesson Plan: O-RO-02-09-03

Objective: EO-17

Justification: To lower steam demand, operator has to either open the test valve more or reduce flow rate. Test valve is already full open. Minimum flow in auto is 3000 gpm requiring controller to be swapped to manual prior to reducing flow. Other distractors are plausible manipulations. 'a' and 'd' would increase steam flow, 'b' would violate procedure.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 6

Question: When the operators are using EOP-09, Primary Containment Flooding, how is the water level in the ruptured RPV maintained above the top of the active fuel?

- a. By exiting EOP-09 and entering the RPV water level section of EOP-01.
- b. By exiting EOP-09 and entering RPV flooding procedure EOP-16.
- c. By maintaining drywell water level as necessary to maintain >11 feet in the drywell.
- d. By establishing a primary containment water level band between 68 feet and 77 feet.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 6

Reference: EOP-03 EPG

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295009AA2.01 (4.2)

CFR: 43.5

License Level (R/S/B): S

Question Level: M

Question Source: Bank #125

Lesson Plan: O-RO-03-04-05

Objective: EO-1

Justification: 68 feet in primary containment corresponds to TAF. 11 feet corresponds to level where RPV venting required because bottom of recirc loop reached. 'a' and 'b' are plausible actions to regain level above TAF if examinee doesn't understand basis of EOP-09.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 7

Question: The reactor is at rated pressure when inerting of the torus is initiated.

What is the potential consequence if the Drywell Purge Supply Isolation Valve (AO-5035A) is inadvertently left open during torus inerting?

Note: Refer to the provided P&ID M227, Sh. 1 and Sh. 2

- a. A direct flowpath from the drywell to torus air space would bypass the suppression pool.
- b. N2 flow into the drywell would cause chugging at the downcomers.
- c. It would cause excessive cycling of the torus to drywell vacuum breakers.
- d. If the SBGT fan tripped, drywell pressure would reach 2.2# prior to being able to secure N2 flow.

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 7

Reference: PNPS 2.2.70, PCAC

Exam Reference  
Provided To Candidate: P&ID M227, Sh. 1 and Sh. 2

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295010AK2.04 (2.8)

CFR: 41.9

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-08-02

Objective: EO-15

Justification: The caution associated with this condition is given in 2.2.70. Analysis shows that a single failure (common isolation relay) could prevent isolation on LOCA.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 8

Question: Given the following conditions:

- A failure to scram has occurred
- RPV pressure is being maintained 1000 psig to 1050 psig
- Torus water temperature is 170 deg. F and rising slowly
- RHR is in torus cooling
- Torus waster level is 110 inches and lowering slowly
- Torus bottom pressure 5 psig

An alternate depressurization must be performed:

- a. immediately due to exceeding the Heat Capacity Temperature Limit (HCTL).
- b. immediately due to exceeding Pressure Suppression Pressure (PSP).
- c. when torus water temperature exceeds 175 F to prevent exceeding the Primary Containment Pressure Limit.
- d. when torus water temperature reaches 175 F to prevent exceeding RHR NPSH limits.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 8  
Reference: EOP-03  
Exam Reference  
Provided To Candidate: EOP's without entry conditions

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295013AK3.02 (3.8)

CFR: 41.5  
License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-03-04-09  
Objective: EO-4a

Justification: Alternate depressurization required if torus temp can't be maintained less than HCTL. For conditions given, torus temp in excess of HCTL requiring immediate alternate depressurization. 'b', 'c', 'd' plausible if examinee does not know how to interpret HCTL or NPSH curves.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 9

Question: A plant startup is in progress with reactor power at 55% and core flow at 50 Mlbm/hr (70% load line). Control room personnel receive alarms and parameter changes indicating a loss of feedwater heating has occurred. Which of the following represents the necessary power reduction that is required?

Note: Refer to provided Power to Flow Map

- a. Reduce recirc pump speed to minimum. No further power reduction is required.
- b. Reduce recirc pump speed to minimum, then insert rods for further power reduction.
- c. Reduce core flow at 39 Mlbs/hr. No further power reduction is required.
- d. Reduce core flow to 39 Mlbs/hr., then insert rods for further power reduction.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 9

Reference: PNPS 2.1.14 Station Power Changes  
PNPS 2.1.150, Loss of Fw Heating

Exam Reference  
Provided To Candidate: Power to Flow Map

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 2950142.4.49 (4.0)

CFR: 41.10  
License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #2316

Lesson Plan: O-RO-03-03-04

Objective:

Justification: Loss of feedwater heating requires a 25% power reduction.  
Examinee must employ proper technique for power reduction based on requirements of 2.1.14 and analysis of power to flow map.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 10

Question: All equipment is fully operable when REMVEC calls and states that the 345KV lines will not be able to maintain 342KV if PNPS goes off grid. Which action below should you take?

- a. Insert a manual scram.
- b. Lower power to <90%, start and load the EDG's on A5/A6, and enter a 3 day LCO.
- c. Lower power to <90%, do not start or load EDG's unless A5/A6 voltage drops to <3859, and enter a 24 hour LCO.
- d. Transfer all 4160 buses to the startup transformer and verify operability of the startup and shutdown transformers.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 10

Reference: PNPS 2.4.144 Degraded Voltage

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295014AA1.02 (3.8)

CFR: 43.2  
License Level (R/S/B): S

Question Level: M

Question Source: Bank #4174

Lesson Plan: O-RO-03-03-24

Objective:

Justification: Subsequent action of placing EDG's on A5/A6 for given condition is expected knowledge from memory. Condition indicates that startup transformer inoperable which is a 3 day LCO.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 11

Question: Instrument air is slowly degrading and is currently at 45 psig the crew observes random rod drifts throughout the core. The reason for the random rod drifts is:

- a. proper operation of the SPVAH dump valve.
- b. failure of the SPVAH dump valve to properly actuate.
- c. the inservice CRD Flow Control Valve failed closed.
- d. the inservice CRD Flow Control Valve failed open

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 11

Reference: RPS Reference Text, page 10

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295015AK2.11 (3.7)

CFR: 41.6

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-03-05-33

Objective:

Justification: Basis for SPVAH dump valve is to prevent random opening of scram outlet valves on a slow loss of instrument air. 'c' is true for loss of air condition, but would not cause rod drifts. 'd' is not true for loss of air, but would cause rod drifts. Scram outlet valves begin to open at approximately 45#.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 12

Question: Which one of the following is true if control is established at an Alternate Shutdown Panel?

- a. The ASP bypasses the control room controls and relays, but relays in the Cable Spreading Room is still available to control the equipment.
- b. The ASP bypasses both the control room controls and relays and also the relays in the Cable Spreading Room.
- c. The ASP does not bypass the control room controls and relays, but does bypass relays in the Cable Spreading Room.
- d. The ASP provides a parallel means of operating the equipment. Both control room controls and relays as well as relays in the Cable Spreading Room are still available to operate the equipment.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 12

Reference: PNPS 2.4.143 Shutdown From Outside Control Room

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295016AK2.02 (4.1)

CFR: 41.7

License Level (R/S/B): R

Question Level: M

Question Source: Bank #3473

Lesson Plan: O-RO-03-03-26(01)

Objective:

Justification: Purpose of ASP is to bypass any cabling in the control room or Cable Spreading Room that could be affected by fire, therefore ASP's bypass control room controls and relays as well as the relays in the Cable Spreading Room.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 13

Question: If damage occurs to electrical wiring in the Cable Spreading Room, due to a fire or other causes, control is shifted (1)\_\_\_\_\_ Alternate Shutdown Panels (2)\_\_\_\_\_ (ASP).

- a. (1) to all  
(2) as soon as possible
- b. (1) to all  
(2) only if the control room remains manned
- c. (1) only to the RCIC and SRV  
(2) as soon as possible
- d. (1) only to the RCIC and SRV  
(2) only if the control room remains manned

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 13

Reference: PNPS 2.4.143 Shutdown From Outside Control Room

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295016AK3.03 (3.7)

CFR: 41.10

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-03-03-26(01)

Objective:

Justification: Procedural requirement to shift all ASP's for given condition. This is a supplementary action that is expected knowledge because it is conceptual in nature to the prevention of spurious equipment operation.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 14

Question: Regarding the Initial Notification associated with an Emergency Declaration, which one of the following sets of conditions constitutes a "RELEASE IN PROGRESS"? Base your answer ONLY on the information provided.

Note: Refer to the provided PAR flowchart

- a. Following an unisolable RWCU leak in the Rx. Building, the Main Stack PRM High Alarm is received and remains in solid for 25 minutes, but remains below the high-high setting.
- b. Following an isolable main steam leak on the turbine deck, the Turbine Building Vent Rad Monitor (RI 1001-610) comes on scale and is reading 0.8 R/hr.
- c. Secondary Containment isolates on signals on Refuel Floor Exhaust High Radiation following a fuel bundle drop event while refueling.
- d. Following a fuel element failure, the Offgas to the Main Stack isolates following the expiration of the 13 minute timer from the SJAE PRMs.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 14

Reference: EPIP-100 Definition

Exam Reference  
Provided To Candidate: EPIP-400 Att 1 PAR Chart

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295017AA2.01 (4.2)

CFR: 43.5

License Level (R/S/B): S

Question Level: C

Question Source: Bank #4201

Lesson Plan: O-RO-07-02-01

Objective: EO-2

Justification: 'b' indicates that there is a release from the Turbine Building associated with an emergency event. The other distractors do not meet EAL 5.1 classifications.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 15

Question: The plant is in refuel and fuel is currently being moved from the core to the spent fuel pool when the 'C' Refuel Floor Radiation Monitor fails downscale. Which ONE of the following would allow continued refuel operations?

- a. Isolating the Secondary Containment and starting SBGT system.
- b. Verifying that the 'A' Refuel Floor Radiation Monitor is operable.
- c. Verifying that 'B' and 'D' Refuel Floor Radiation Monitor is operable.
- d. Trip either the 'B' or 'D' Refuel Floor Radiation Monitor.

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 15

Reference: Tech. Spec. Table 3.2.D

Exam Reference  
Provided To Candidate: Tech. Specs. Without Definitions or Bases

SRO Tier # / SRO Gr 1/1

K/A and Imp: 2950232.1.12 (4.0)

CFR: 43.7

License Level (R/S/B): S

Question Level: C

Question Source: Modified Bank

Lesson Plan: O-RO-02-03-02

Objective: EO-15

Justification: Tech. Specs. requires 2 out of 2 instruments. A downscale failure does not trip the channel, therefore LCO not met require action to be taken. 'b', 'c', 'd' plausible actions if logic arrangement is not understood or Tech. Spec. misinterpreted.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 16

Question: During handling of irradiated fuel in Secondary Containment, the following alarms are received:

REFUEL FLOOR RAD HI  
REFUEL FLOOR VENT RAD CHAN A HI  
REFUEL FLOOR VENT RAD CHAN B HI

If the crew finds that neither SBGT fan will start, the required compensatory action is:

- a. evacuate the Reactor Building.
- b. lock closed or verify locked closed the inner RBTL personnel pass door.
- c. evacuate refuel floor personnel to the RB 91' changeout area.
- d. don SCBA's in the control room.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 16

Reference: PNPS 5.4.3, Refuel Floor High Rad

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295023AK2.05 (3.7)

CFR: 41.11  
License Level (R/S/B): R

Question Level: M

Question Source: Modified Bank #3213

Lesson Plan: O-RO-02-08-03  
Objective: EO-1

Justification: This is a supplementary action that is expected knowledge related to the importance of SBGT for a refueling accident. 'b' and 'c' are valid actions, but not SBGT compensatory actions. 'd' is an action if CRHEAF's fails to start.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 17

Question: During a LOCA condition, if torus bottom pressure exceeds the Pressure Suppression Pressure, an alternate depressurization is performed to prevent:

- a. exceeding the drywell design temperature.
- b. exceeding the primary containment pressure limit.
- c. excessive differential pressure from developing between the torus and drywell.
- d. chugging at primary containment downcomer openings.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 17

Reference: EOP-03, EPG's

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295024EK1.01 (4.2)

CFR: 43.5  
License Level (R/S/B): S

Question Level: M

Question Source: New

Lesson Plan: O-RO-03-04-11  
Objective: EO-14

Justification: EOP basis question tests the importance of performing an alternate depressurization. 'a', 'c' and 'd' are plausible based on steam in the torus air space, but are actually bases for other actions in EOP-03.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 18

Question: Which one of the following describes the effects on SRV operation if a loss of pneumatic supply to the SRVs were to occur?

- a. SRVs will not lift on high RPV pressure. SRVs will not open via the control switch or ADS logic.
- b. SRVs will lift on high RPV pressure until their accumulators discharge and then will fail to function in this mode. SRVs will open via the control switch or ADS logic until their accumulators are discharged.
- c. SRVs will always lift on high pressure regardless of the status of their accumulators. SRVs will open via the control switch or ADS logic until their accumulators are discharged.
- d. SRVs will lift on high RPV pressure until their accumulators discharge and then will fail to function in this mode. SRVs will always open via the control switch or ADS logic regardless of the status of their accumulators.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 18

Reference: Main Steam Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295025EA1.03 (4.4)

CFR: 41.3

License Level (R/S/B): R

Question Level: M

Question Source: Bank #0826

Lesson Plan: O-RO-03-04-03

Objective: EO-15

Justification: Tests understanding of SRV operation and SRV pneumatic arrangement.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 19

Question: The following conditions exist:

- A failure to scram has occurred
- No boron has been injected
- Reactor power is 30%
- The Main Turbine is tripped
- The Main Condenser is available
- Torus water level is normal
- Heat Capacity Temperature Limit (HCTL) has been exceeded

Which one of the following states the proper method of controlling reactor pressure?

- a. Reactor pressure should be reduced using the main turbine bypass valves to return below the HCTL curve.
- b. Reactor pressure should be reduced using SRVs to return below the HCTL curve.
- c. Rapidly depressurize using the main turbine bypass valves.
- d. Alternately depressurize using the SRVs.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 19

Reference: EOP-03

Exam Reference

Provided To Candidate: EOP's without entry conditions

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295026EA2.03 (4.0)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Bank #3350

Lesson Plan: O-RO-03-04-05

Objective: EO-14a

Justification: When torus water temperature cannot be maintained below HCTL, then alternate depressurization is required. 'a' and 'b' plausible because override in EOP-02 allows a cooldown if HCTL approached. 'c' is plausible if HCTL approached in EOP-01.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 20

Question: Due to unisolable rupture in the RHR piping torus water level is 90" and lowering at 1 inch every 10 minutes. All efforts to provide torus makeup have failed. Your responsibilities as the OSS would be to:

- a. - Do not declare a Site Area Emergency until torus level reaches 89"
  - Verify the crew has secured HPCI only if HPCI is NOT required for adequate core cooling
- b. - Do not declare a Site Area Emergency until torus level reaches 89"
  - Verify that the crew is initiating a reactor scram and alternate depressurization per EOP-17
- c. - Immediately declare a Site Area Emergency
  - Verify the crew has secured HPCI only if HPCI is NOT required for adequate core cooling
- d. - Immediately declare a Site Area Emergency
  - Verify the crew is initiating a reactor scram and alternate depressurization per EOP-17

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 20

Reference: EPIP-100 definitions

Exam Reference

Provided To Candidate: None

SRO Tier # / SRO Gr 1/1

K/A and Imp: 2950302.4.38 (4.0)

CFR: 43.5

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-07-02-01

Objective: EO-2

Justification: Since torus level is at 90", alternate depressurization and Site Area Emergency declaration should be done immediately, and not wait another 10 minutes to reach 89". 'a' and 'c' contain statements about HPCI that are not correct because HPCI is secured at 95" regardless of adequate core cooling.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 21

Question: Following an Alternate RPV Depressurization due to low torus level, plant conditions are:

RPV Level	-110 inches rising slowly
Torus Bottom Pressure	1 psig, steady
Torus Temperature	175 deg. F, steady
Torus Level	40 inches, steady

Based on the above conditions, which of the following could be used to supply 5000 GPM of injection flow?

- a. One core spray pump.
- b. Two core spray pumps.
- c. One RHR pump.
- d. Two RHR pumps.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 21

Reference: EOP-03

Exam Reference

Provided To Candidate: EOP's w/o entry conditions

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295030EA1.01 (3.8)

CFR: 41.5

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #3181

Lesson Plan: O-RO-03-04-11(06)

Objective:

Justification: Torus level is 40" which is above the vortex limit of 35". For 5000 gpm and the given conditions, all other pump combinations, except 2 RHR pumps, result in inadequate NPSH.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 22

Question: During a reactor level transient, the lowest level observed and recorded on any reactor level indicator was +22". However, during the transient the following alarms were received:

Reactor Water Level Lo (Red Tile)  
Auto Scram Channel A (Red Tile)

A half scram exists on the A channel of RPS. Your conclusion would be:

- a. one or both level instruments that feed 'A' RPS must be miscalibrated. Do not scram the reactor.
- b. one or both level instruments that feed 'B' RPS must be miscalibrated. Scram the reactor.
- c. all level instruments must be miscalibrated. Do not scram the reactor.
- d. the reactor low level alarm indicates that a full scram signal was present. Immediately scram the reactor.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 22

Reference: ARP-C905R-C2

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 295031EK2.11 (4.4)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-07-07

Objective: EO-7

Justification: Any one level instrument tripping would cause a low level scram alarm and half scram. Since all level indicators remained at or above +22", at least one low level trip unit on RPS 'A' must be out of calibration.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 23

Question: During an ATWS, the crew initiated SBLC and later lowered reactor level to control reactor power (Q-leg). Initial SBLC tank level was 4000 gallons.

What is the highest SBLC tank level where reactor water level be restored to a normal band above the "LL" limit?

- a. 1100 gallons SBLC tank level
- b. 1600 gallons SBLC tank level
- c. 2900 gallons SBLC tank level
- d. 2400 gallons SBLC tank level

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 23

Reference: EOP-02

Exam Reference  
Provided To Candidate: EOP's without entry conditions

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295037EA2.03 (4.4)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #3532

Lesson Plan: O-RO-02-04-04

Objective: EO-14

Justification: To raise level above LL, hot shutdown boron weight must be injected to the reactor. This is equal to 1100 gallons. 'a' represents a misinterpretation of the requirement. 'b' and 'd' are similar distractors for cold shutdown boron weight.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 24

Question: In a plant emergency, if a projected dose at the site boundary or beyond indicates that a member of the public would receive >1000 mrem, steps are taken to evacuate and shelter all areas within \_\_\_\_\_ of the plant to minimize exposure due to \_\_\_\_\_.

- a. 10 miles, the plume
- b. 10 miles, ingestion of radioactive materials
- c. 50 miles, the plume
- d. 50 miles, ingestion of radioactive materials

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 24

Reference: O-RO-07-01-01, E-Plan Overview

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/1

K/A and Imp: 295038EK3.01 (4.5)

CFR: 43.5

License Level (R/S/B): S

Question Level: M

Question Source: New

Lesson Plan: O-RO-07-01-01

Objective: EO-4

Justification: The examinee needs to recognize that >1000 mrem represents a General Emergency classification where a Protective Action Recommendation (PAR) is warranted. A PAR requires evacuation and shelter within 10 miles of the plant.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 25

Question: A loss of coolant accident has occurred inside the primary containment. Containment parameters indicate as follows:

Hydrogen	7%
Oxygen	2%
Torus Water Level	200 inches
Torus Water Temp	103 deg. F
Drywell Temp	245 deg. F
Torus Bottom Pressure	20 psig

Based on the information given, it is now appropriate to:

- a. vent the torus and if the torus can be vented, establish air purge.
- b. vent the drywell and if the drywell can be vented, establish air purge.
- c. vent the torus and if the torus can be vented, establish nitrogen purge.
- d. vent the drywell and if the drywell can be vented, establish nitrogen purge.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 25

Reference: EOP-03 (or 5.4.6 Primary Cont. Venting and Purging under Emergency Conditions)

Exam Reference  
Provided To Candidate: EOP-03 without entry conditions.

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 500000EA1.03 (3.2)

CFR: 41.10  
License Level (R/S/B): R

Question Level: C

Question Source: Bank #0776

Lesson Plan: O-RO-03-04-05  
Objective: EO-14a

Justification: This tests an examinees understanding of H2 leg of EOP-03. The distractors are arranged to see if interpretation of torus level <300" (torus vent), and O<sub>2</sub> <5% (nitrogen purge) results in determining the correct answer.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 26

Question: A large break LOCA has occurred. Drywell hydrogen and oxygen concentrations are both >6% and rising even though emergency venting and purging are in progress. The following conditions exist:

Drywell Pressure 40#, Steady  
Drywell Temperature 320 deg. F, Steady  
Torus Water Level 150", Steady  
Reactor Water Level -130", Steady

All injection sources are inoperable except one RHR pump which is injecting at maximum flow to maintain reactor level at -130". What should be done with the RHR configuration?

- a. Maintain the current RHR configuration.
- b. Initiate torus spray only.
- c. Initiate drywell spray only.
- d. Initiate torus and drywell sprays.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 26

Reference: EOP-03, 5.4.6

Exam Reference  
Provided To Candidate: EOP's without entry conditions

SRO Tier # / SRO Gr 1/1  
K/A and Imp: 500000EK1.01 (3.9)

CFR: 41.10  
License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-03-04-05  
Objective: EO-3

Justification: With combustible limits exceeded, sprays initiated without regard to adequate core cooling. DSIL curve not met so DW sprays not used.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 27

Question: During a reactor shutdown, the condensate minimum flow valve (FV-3351) has failed to open at its setpoint. Which of the following will result as reactor power approaches a shutdown condition?

- a. Excessive low pressure feedwater heater pressure causing heater tube deformation.
- b. Excessive condensate demineralizer differential pressure causing damage to the laterals.
- c. Loss of cooling to the air ejector condenser causing a loss of condenser vacuum.
- d. Loss of cooling to the gland seal condenser causing a loss of vacuum.

Answer: c

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 27  
Reference: Condensate and Feed Reference Text  
Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2  
K/A and Imp: 295002AA1.01 (2.6)

CFR: 41.7  
License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-04-02  
Objective: EO-3g

Justification: The location of the tap for the min flow valve is designed to provide cooling to gland seal condenser and air ejector condenser. A loss of cooling to the air ejector condenser will cause air ejectors to become vapor bound causing a loss of vacuum. 'a' is plausible due to higher than normal pressures caused by shutoff head. 'b' is plausible except the result would be low differential pressure. 'd' would result in steam leaking at the turbine glands and not a loss of vacuum.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 28

Question: Assume the NRC during the next outage required demonstration of battery capacity by operating emergency DC loads until an actual loss of DC power was experienced. The proper controls for performing such a test would be provided in the form of:

- a. surveillance procedure.
- b. temporary procedure.
- c. special test procedure.
- d. abnormal procedure.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 28

Reference: NOP98A1

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2

K/A and Imp: 2950042.2.7 (3.2)

CFR: 43.3

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-06-06-01

Objective: EO-2b

Justification: The test that is described meets the criteria of a special test as described in NOP98A1. Since the purpose of using a "special test" is conceptual in nature, this is expected knowledge of an examinee.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 29

Question: A reactor scram has occurred approximately 50 seconds ago. All stop, intermediate stop, and intercept valves are closed. A turbine lockout did not occur. You should:

- a. depress the MASTER trip pushbutton on C2.
- b. direct a NLNPRO to trip the turbine from the front standard from C3.
- c. open the main generator field breaker, then open ACB-104 and ACB-105 from C3.
- d. open ACB-104 and ACB-105 from C3, then open the main generator field breaker.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 29

Reference: Main Generator Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2

K/A and Imp: 295005AA1.04 (2.8)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: Bank #852

Lesson Plan: O-RO-02-01-08

Objective: EO-15

Justification: A turbine lockout opens the generator output breakers, opens the field breaker and initiates a fast transfer of 4160V buses. In this case, opening ACB-104 and 105 would initiate the fast transfer of 4160V buses. The examinee needs to recognize the turbine is already tripped because stop, intermediate, and intercepts valves are closed. The turbine trip should have caused a turbine lockout, therefore 'a' and 'b' would not be effective. 'c' represents an improper sequence for performance of actions.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 30

Question: Given the following conditions:

- Reactor power is steady at 40%
- FWLC is in master auto control with the setpoint at +30"
- Reactor Vessel Level Control System is in 3-element control
- The 'B' feedline flow instrument signal fails to zero

Which one of the following describes the response?

Actual reactor level will:

- a. lower, then return to the original level.
- b. lower, and stabilize at a lower level.
- c. rise until the main turbine and feed pumps trip.
- d. rise, and stabilize at a higher level.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 30

Reference: FWLC Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2

K/A and Imp: 295008AA2.02 (3.4)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-07-04-10

Objective: EO-28

Justification: The level error will compensate for feed flow/steam flow mismatch prior to a turbine trip. For the given conditions, level should stabilize at approximately +34".

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 31

Question: With the reactor at rated pressure, which of the following describes how to distinguish between loss of cooling in the drywell and a small break LOCA?

- a. For loss of drywell cooling, drywell temperature can rise to 280 deg. F without a significant rise in drywell pressure (remains less than 16#).
- b. For a loss of drywell cooling, drywell pressure can rise to greater than 16# without a significant rise in drywell temperature (remains less than 150 deg. F).
- c. For a small break LOCA, drywell temperature can rise to 280 deg. F without a significant rise in drywell pressure (remains less than 16#).
- d. For a small break LOCA, drywell pressure can rise to greater than 16# without a significant rise in drywell temperature (remains less than 150 deg. F).

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 31  
Reference: Thermodynamics - P-V-T relationship  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 1/2  
K/A and Imp: 295012AK1.01 (3.5)  
  
CFR: 41.14  
License Level (R/S/B): R  
  
Question Level: C  
  
Question Source: New  
  
Lesson Plan: O-RO-03-04-11(18)  
Objective:

Justification: With a LOCA present, steam addition to the primary containment causes pressure to rise more than a loss of drywell cooling. Loss of drywell cooling is PV/T only. 'b' is opposite to 'a' and is incorrect. 'c' cannot happen due to the introduction of steam into the drywell, limiting the drywell temp. rise. 'd' cannot happen due to steam introduction to cause 16# will result in >150 deg. drywell temp.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 32

Question: Which of the following recirc system related components would NOT be directly affected by a loss of RBCCW?

- a. Recirc pump motor windings.
- b. Recirc MG set room cooler units.
- c. Recirc pump seal cooler.
- d. Recirc pump motor oil cooler.

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 32

Reference: Recirc Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2  
K/A and Imp: 295018AK2.01 (3.4)

CFR: 41.7  
License Level (R/S/B): R

Question Level: M

Question Source: Bank #2653

Lesson Plan: O-RO-02-02-06  
Objective: EO-2

Justification: All components except 'a' receive RBCCW cooling. The motor windings receive indirect cooling from drywell coolers.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 33

Question: During plant operations, a H<sub>2</sub> leak in the area of the main generator results in an explosion. The explosion causes an instrument air line to be severed resulting in a loss of instrument air requiring a reactor scram.

What Emergency Plan Classification would be declared?

- a. Unusual Event
- b. Alert
- c. Site Area Emergency
- d. General Emergency

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 33

Reference: EAL 7.3.1.2

Exam Reference  
Provided To Candidate: EAL's

SRO Tier # / SRO Gr 1/2

K/A and Imp: 2950192.4.38 (4.0)

CFR: 43.5

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-07-02-01

Objective: EO-2

Justification: An explosion that impacts plant operation constitutes EAL 7.3.1.2.  
The reactor scram impacts plant operation.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 34

Question: Following a loss of off-site power, HPCI is operating in full flow test for reactor pressure control. A SPURIOUS Group 7 isolation occurs (HPCI vacuum breaker isolation). What action is required?

- a. Continue running HPCI as needed. If HPCI is later shutdown, before restarting HPCI, have I&C install jumpers per the HPCI system procedure and open the HPCI containment isolation valves prior to restarting HPCI.
- b. Continue running HPCI as needed. If HPCI is later shutdown, before restarting HPCI, override the Group 7 isolation using the Group 7 keylock override and open the HPCI containment isolation valves.
- c. Immediately shutdown HPCI. Before restarting HPCI, have I&C install jumpers per the HPCI system procedure and open the HPCI containment isolation valves prior to restarting HPCI.
- d. Immediately shutdown HPCI. Before restarting HPCI, override the Group 7 isolation using the Group 7 keylock override and open the HPCI containment isolation valves.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 34  
Reference: ARP-C903C-E5  
Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2  
K/A and Imp: EO-2.c.3

CFR: 41.10  
License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan:  
Objective: O-RO-02-09-03

Justification: Although this information is contained in an ARP, the examinee should be able to evaluate the purpose of the vacuum breakers and conclude that operation of HPCI should continue. That narrows the choice to 'a' and 'b'. Next, the examinee needs to recall that a keylock override exists to conclude 'b' is the correct answer.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 35

Question: A plant shutdown/cooldown is in progress per PNPS 2.1.5. When RHR shutdown cooling pressure interlocks are cleared, shutdown cooling is placed in service using the 'A' RHR loop. 'B' recirculation pump is running. Due to a loss of Bus A-5, shutdown cooling is lost.

Plant conditions are as follows:

'B' recirc suction temp	180 deg. F
RPV Level	+30 inches, stable

When is RPV level required to be raised to promote natural circulation?

- a. Immediately.
- b. Not required unless 'B' RHR cannot be placed in the shutdown cooling mode.
- c. Not required if the main condenser is available.
- d. Not required because the 'B' recirc pump is running.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 35

Reference: PNPS 2.4.25, Loss of Shutdown Cooling

Exam Reference

Provided To Candidate: None

SRO Tier # / SRO Gr 1/2

K/A and Imp: 295021AK2.07 (3.2)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Bank #3208

Lesson Plan: O-RO-03-03-15(01)

Objective:

Justification: 2.4.25 specifically states that on loss of S/D cooling, if a recirc pumps running, then level does not need to be raised. 'a' would be correct if recirc not running. 'b' is not allowed. 'c' would be true if the reactor was pressurized.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 36

Question: The reactor is critical with reactor pressure at 940#. A sustained loss of both CRD pumps occurs. Which one of the following conditions would require immediate scrambling of the reactor?

- a. If any one control rod begins drifting in.
- b. If any two adjacent rods receive accumulator trouble alarms.
- c. If eight or more rods receive high temperature alarms.
- d. If six or more non-adjacent rods have accumulator trouble alarms and reactor pressure lowers.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 36

Reference: PNPS 2.4.4, Loss of CRD Pumps

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2

K/A and Imp: 295022AA2.01 (3.6)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-03-02-09(02)

Objective:

Justification: 'b' is a subsequent action that is expected to be known because of implication of a potential failure to scram condition. 'a' is not true, but represents a reactivity change. 'c' and 'd' are correct numbers for other conditions requiring a scram. (ie. if eight accumulator trouble alarms, then scram; if six rods scram, then scram.)

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 37

Question: A large break LOCA has resulted in depressurizing the reactor to 0 psig. Drywell temperature is reported to be 300 deg. F. Control room operators report flashing was observed on the fuel zone indicators after the reactor depressurized, but it has now stopped. Fuel zone level indication is reported to be -240".

Which of the following is actual reactor level?

Note: Refer to the provided Fuel Zone Instrument Density Compensator Aid (Water Wheel)

- a. -222"
- b. -258"
- c. -196"
- d. Below the fuel zone variable leg tap

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 37

Reference: PNPS 2.2.80 Reactor Vessel Level, Temp. and Internal Pressure Ins., page 55 and 56

Exam Reference  
Provided To Candidate: Fuel Zone Instrument Density Compensator Aid

SRO Tier # / SRO Gr 1/2  
K/A and Imp: 295028EK1.01 (3.7)

CFR: 41.7  
License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #2637

Lesson Plan: O-RO-03-04-03  
Objective: EO-12

Justification: Since conditions confirm flashing, then 18" subtracted. 'a' balances 'b' for a math error, 'c' and 'd' represent solutions if 44" compensation inadvertently used.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID:

38

Question: While performing RCIC OPERABILITY TEST, the RCIC steam supply line ruptured. RCIC failed to automatically isolate and attempts to manually isolate RCIC are unsuccessful.

The following Steam Leak Detection Areas are in alarm:

- RCIC piping area -23 ft. El. (Tip Room), reading 268 deg. F
- RCIC torus piping area, reading 250 deg. F
- RCIC turbine area, reading 180 deg. F
- HPCI piping area ('B' RHR Valve Room), reading 210 deg. F

No other areas are in alarm. Assuming that plant procedures were followed:

- a. A controlled shutdown should be in progress.
- b. A reactor scram should have previously been inserted. Cooldown at normal rates should be in progress.
- c. A reactor scram should have been previously inserted. Bypass valves may now be opened in anticipation of Alternate RPV Depressurization.
- d. A reactor scram should have been previously inserted. Alternate RPV Depressurization should be in progress.

Answer:

d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 38

Reference: EOP-04

Exam Reference  
Provided To Candidate: EOP's without entry conditions

SRO Tier # / SRO Gr 1/2

K/A and Imp: 2950322.1.32 (3.8)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Bank #3199

Lesson Plan: O-RO-03-04-06

Objective: EO-11a

Justification: Requires interpretation of EOP-04 that a primary system is discharging and 2 temperatures are in excess of max safe operating values.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 39

Question: Following a TIP trace, the TIP probe is withdrawn. As the TIP probe reaches its end of travel, the ARM outside the TIP room pegs high at 100 mr/hr.

Radiation levels are reported to be 500 mr/hr. just inside the east entrance to the Reactor Building.

The high radiation is (1) \_\_\_\_\_ and the crew would be required to (2) \_\_\_\_\_.

- a. (1) Normal  
(2) Verify radiation levels trend downward over time
- b. (1) Normal  
(2) Direct HP to survey the area
- c. (1) Due to malfunction of the TIP machine  
(2) Evacuate the area, but NOT enter EOP-04
- d. (1) Due to a malfunction of the TIP machine  
(2) Evacuate the area AND enter EOP-04

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 39

Reference: ARP-C904LC-A7

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2  
K/A and Imp: 295033EA2.03 (4.2)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #0048

Lesson Plan: O-RO-02-07-08

Objective: EO-2f

Justification: Based on given indications, examinee should conclude that TIP has malfunction due to the magnitude of the rad level. Also, should conclude that 500 mr/hr. at the given location would exceed criteria for "max normal" rad levels.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 40

Question: As a result of a steam line leak in the Reactor Building, both Reactor Building ventilation exhaust radiation monitors reach the high alarm setpoint. The steam leak is isolated, but the alarm condition remains in for 20 minutes and then clears. As OSS, your responsibility would be to initiate the Emergency Plan and:

- a. declare a transitory Alert and immediately downgrade, to exit the Emergency Plan.
- b. declare an Unusual Event and when conditions warrant initiate a termination checklist to exit the Emergency Plan.
- c. declare an Alert.
- d. declare an alert and then when conditions warrant before the ERO activates, initiate a termination checklist to downgrade from the emergency.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 40

Reference: EPIP 100

Exam Reference  
Provided To Candidate: EAL's

SRO Tier # / SRO Gr 1/2  
K/A and Imp: 2950342.4.38 (4.0)

CFR: 43.5

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-07-02-01

Objective: EO-4

Justification: Requires evaluation of an Unusual Event EAL and recognition the Emergency Response Organization is not activated. Therefore, OSS would be responsible to downgrade and exit the E-Plan.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 41

Question: Following a Reactor Building Isolation signal the Reactor Building differential pressure is observed to be Zero.

Which ONE of the following would cause this conditions?

- a. The Reactor Building Exhaust dampers have failed to close.
- b. The Reactor Building Exhaust Fans failed to trip.
- c. One Standby Gas Treatment Fan failed to start.
- d. Both Standby Gas Treatment Fans failed to start.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 41

Reference: SBT Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 1/2  
K/A and Imp: 295035EK2.02 (3.8)

CFR: 41.10

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-08-03

Objective: EO-1

Justification: 'a' and 'b' tests understanding that only supply fans can cause a loss of differential pressure. 'c' demonstrates understanding that each SBT fan has 100% capacity.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 42

Question: Following a large break LOCA the following conditions exist:

- All low pressure ECCS systems are injecting at rated flow in order to maintain reactor level above TAF
- Drywell and torus radiation levels indicate that a 1% melt condition exists

A pipe break occurs in the discharge of the 'D' RHR pump. The NW quadrant is reported to have 3" of water and rising.

Under these conditions, the Reactor Building sump pumps should be \_\_\_\_\_ and the 'D' RHR pump should be \_\_\_\_\_.

- a. (1) operated  
(2) secured
- b. (1) operated  
(2) maintained running
- c. (1) disabled  
(2) secured
- d. (1) disabled  
(2) maintained running

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 42

Reference: EOP-04

Exam Reference

Provided To Candidate: EOP-04 without entry conditions

SRO Tier # / SRO Gr 1/2

K/A and Imp: 295036EK3.04 (3.4)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Bank #817

Lesson Plan: O-RO-03-04-06

Objective: EO-11b

Justification: Indications of core damage require disabling RB sump pumps. Also, since the RHR pump is needed for core cooling, it is not isolated.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 43

Question: The reactor is operating at 100% power on the 100% rod line. Both PBDS channels are inoperable. The following sequence of events occur:

A fire alarm annunciates for the 37' switchgear room.

4160 VAC bus A5 trips and locks out

An NLNPRO reports that a fire is burning out of control in the 37' switchgear room.

A reactor scram is required:

Note: Refer to the provided Power to Flow Map

- a. Due to the fire's effect on equipment located in the east side of the reactor building.
- b. Due to 'A' recirc pump tripping.
- c. In anticipation of electrical grounding caused by fire fighting efforts.
- d. Due to the loss of 'A' loop of RBCCW.

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 43

Reference: PNPS 2.4.143.1 Shutdown With A Fire in Reactor Building East

Exam Reference  
Provided To Candidate: Power to Flow Map

SRO Tier # / SRO Gr 1/2

K/A and Imp: 600000AK2.04 (2.6)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #2346

Lesson Plan: O-RO-03-03-25(01)

Objective:

Justification: Initiating a scram for a fire in the switchgear room is immediate action associated with the reference procedure. 'b', 'c' and 'd' are plausible, but incorrect.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 44

Question: When there are less than three reactor feed pumps operating and reactor water level lowers to +19", a recirc runback occurs to:

- a. 26%, to ensure adequate NPSH is available to the recirculation pumps.
- b. 26%, to ensure power is reduced to within the capacity of two feed pumps.
- c. 44%, to ensure adequate NPSH is available to the recirculation pumps.
- d. 44%, to ensure power is reduced to within the capacity of two feed pumps.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 44  
Reference: PNPS 2.2.84 Reactor Recirculation System  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 2/1  
K/A and Imp: 202002A4.07 (3.2)  
  
CFR: 41.7  
License Level (R/S/B): R  
  
Question Level: m  
  
Question Source: Bank #3920  
  
Lesson Plan: O-RO-02-06-10  
Objective: EO-5  
  
Justification: 'd' is the basis for the 44% runback.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 45

Question: Following a loss of off-site power, both loops are placed in "maximized torus cooling" using 'C' & 'D' RHR pumps without the use of overrides. A loss of all high pressure feedwater systems occurs which results in a slowly lowering reactor water level.

The current plant conditions are as follows:

- Reactor pressure 390 psig
- Drywell pressure 1.5 psig

Which of the following describes the effect on the RHR system when reactor water level reaches -46"?

- a.
  - 'A' & 'B' RHR pumps will start
  - Containment cooling valves (MO-34 and MO-36) will close
  - LPCI Loop Select will NOT initiate
- b.
  - 'A' & 'B' RHR pumps will start
  - Containment cooling valves (MO-34 and MO-36) will close
  - LPCI will lineup to the 'B' Loop (MO-28B will open) but LPCI flow will not initiate
- c.
  - 'A' & 'B' RHR pumps will NOT start
  - The containment cooling valves (MO-34 and MO-36) will remain open
  - LPCI loop select will NOT initiate
- d.
  - 'A' & 'B' RHR pumps will NOT start
  - The containment cooling valves (MO-34 and MO-36) will remain open
  - LPCI will lineup to the 'B' Loop (MO-28B will open) and LPCI flow will initiate

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 45

Reference: RHR Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr: 2/1

K/A and Imp: 203000A4.05 (4.1)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #3894

Lesson Plan: O-RO-02-09-01

Objective: EO-14

Justification: 'b' is only correct answer. Examinee is expected to recognize that at 390#, pressure is higher than the shutoff head of the RHR. This RHR pump characteristic also serves as the basis for the EOP override that states if reactor pressure is <300 psig, then secure low pressure pumps not required for adequate core cooling.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 46

Question: The plant is operating at power when it is determined that neither HPCI area cooler can be started. Which of the following represents the status of HPCI operability?

- a. The HPCI system is inoperable.
- b. The HPCI system is inoperable only if the HPCI Gland Seal Condensate Pump also becomes unavailable.
- c. The HPCI system is inoperable only if a HPCI area temperature also cannot be maintained below a max normal value (per EOP-04).
- d. The HPCI system is inoperable only if the HPCI Gland Seal Condensate Pump also becomes unavailable and then HPCI area temperature cannot be maintained below a max normal value (per EOP-04).

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 46

Reference: PNPS 2.2.47 HPCI Room Area Coolers and 2.2.21 HPCI System

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1

K/A and Imp: 206000A2.12 (3.5)

CFR: 43.2

License Level (R/S/B): S

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-09-03

Objective: EO-26

Justification: 'a' based on a safety evaluation conclusion and definition of operability.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 47

Question: The reactor is operating at 100% power when a loss of 125V DC bus D5 occurs. The reactor is scrammed and actions are taken per PNPS 5.3.12, Loss of Essential DC Bus D17 or D5 or D37. A large break then occurs resulting in the following conditions:

Drywell pressure 18 psig, rising  
Reactor level -140" and lowering  
Reactor pressure 100 psig and lowering

How will the Core Spray System respond to this condition?

- a. Only the 'A' core spray pump will start and only the 'A' injection valve will open.
- b. Both Core Spray pumps will start, but only the 'A' injection valve will open.
- c. Only the 'A' core spray pump will start, but both injection valves will open.
- d. Both core spray pumps will start and both injection valves will open.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 47

Reference: PNPS 5.3.12 Loss of Essential DC Bus D17 or D5 and D37  
PNPS Core Spray Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 209001K2.03 (3.1)

CFR: 41.7  
License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-04  
Objective:

Justification: With a loss of D5, after the reactor is scrammed, A2, A4 and A6 are de-energized making the 'B' core spray pump and injection valve unavailable.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 48

Question: According to Technical Specification bases, the sodium pentaborate in the SBLC system may precipitate from solution if its temperature is not maintained above \_\_\_\_\_ degrees F. To prevent this, the solution temperature shall be maintained above \_\_\_\_\_ degrees F.

- a. 32, 68
- b. 32, 48
- c. 38, 48
- d. 58, 68

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 48

Reference: Tech. Spec. Bases 4.4.5

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 211000K4.03 (3.9)

CFR: 43.2  
License Level (R/S/B): S

Question Level: M

Question Source: Bank #2976

Lesson Plan: O-RO-02-06-06  
Objective: EO-18

Justification: 48 deg. Given in SBLC surveillance requirements. Basis for 48 deg. Is to provide margin for solubility concerns.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 49

Question: RPS and ATWS systems fail to scram the reactor following an MSIV closure. Reactor power has stabilized at 8%. Under these conditions, which of the following primary containment limits would be the first to be exceeded?

- a. Pressure Suppression Pressure
- b. Boron Injection initiation Temperature
- c. Heat Capacity Temperature Limit
- d. Primary Containment Pressure Limit

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 49

Reference: EOP-03

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1

K/A and Imp: 212000K3.09 (3.6)

CFR: 43.5

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-03-04-05

Objective: EO-12

Justification: There is no credible HCTL below approximately 145 deg. BIIT for the given power level is approximately 130 deg. Therefore, 'b' is correct. 'a' and 'd' would eventually be exceeded if operator actions were not taken per EOP-02 and EOP-03 for BIIT and HCTL.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 50

Question: The 24 VDC power to channel 'A' Source Range Monitor (SRM) preamplifier is interrupted and immediately restored, resulting in channel 'A' SRM output trips and alarms.

SELECT the statement that describes the SRM response (assume no operator action).

- a. A DOWNSCALE/INOP rod block was generated, however, the block cleared automatically when power was restored.
- b. A DOWNSCALE/INOP rod block was generated and must be reset on the 936 Panel before further rod withdrawal can take place.
- c. A DOWNSCALE/INOP rod block was not generated because the HV power supply was not affected.
- d. A DOWNSCALE/INOP rod block was not generated because 'A' RPS bus remained energized.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 50

Reference: SRM Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 215004A2.05 (3.5)

CFR: 41.2  
License Level (R/S/B): R

Question Level: M

Question Source: Bank #705

Lesson Plan: O-RO-02-07-01  
Objective: EO-6

Justification: When power to an SRM is restored, the rod block automatically resets. Only the trip memory indicating lights on panel 937 need to be reset manually.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 51

Question: With the plant initially operating at 100% power, the 'A' Recirc Flow Converter fails upscale. Per Technical Specifications, RPS 'A' must be tripped:

- a. within 1 hour and a rod block must be inserted within 1 hour.
- b. within 1 hour and a rod block must be inserted within 7 days.
- c. within 12 hours and a rod block must be inserted within 1 hour.
- d. within 12 hours and a rod block must be inserted within 7 days.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 51  
Reference: Tech. Spec.  
Exam Reference  
Provided To Candidate: Tech Specs w/o definitions or bases

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 215005K6.04 (3.2)

CFR: 43.2  
License Level (R/S/B): S

Question Level: C

Question Source: Modified Bank #2409

Lesson Plan: O-RO-02-07-04

Objective: EO-13h

Justification: 'a' is correct because the flow converter failure inops all 3 APRM's on the 'A' RPS trip system. This makes RPS "untrippable" requiring a 1 hour LCO. With 3 APRM's inop, for the rod block function, it is one less than required. Therefore, a 7 day LCO is indicated.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 52

Question: Given the following post accident plant conditions:

Reactor Pressure: 800 psig  
RPV Water Level: -20 inches  
Drywell Pressure: 10 psig  
Drywell Temperature: 250 degrees  
Torus Water Level: 127 inches  
Torus Water Temperature: 82 degrees  
All Rods: At or beyond position 02  
Reactor Building Vent Rad Hi: In alarm (C904LC-B5)

The EOPs the operators should be using at this time are:

- a. EOP-01, 04, 05 only
- b. EOP-01, 05 only
- c. EOP-01, 03, 04 only
- d. EOP01, 03, 05 only

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 52  
Reference: EOP's  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 2/1  
K/A and Imp: 2160002.4.1 (4.6)  
  
CFR: 41.10  
License Level (R/S/B): R  
  
Question Level: M  
  
Question Source: Bank #106  
  
Lesson Plan: O-RO-03-04-02  
Objective: EO-5  
  
Justification: Requires evaluation of conditions to determine that 'c' is the only correct response.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 53

Question: Which of the following is correct regarding RCIC's status if a loss of D4 occurs and then reactor level lowers to -46"?

- a. RCIC will auto initiate and inject into the reactor.
- b. RCIC will not auto initiate and cannot be manually started from the control room.
- c. The RCIC turbine will automatically start, but the RCIC injection valve (MO-49) will have to be locally opened to initiate injection flow.
- d. RCIC will not auto initiate, but can be manually started from the control room.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 53

Reference: PNPS 2.2.14, page 41-45

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1

K/A and Imp: 217000K2.02 (2.9)

CFR: 41.8

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-09-04

Objective: EO-13g

Justification: D4 supplies the logic and inverter to RCIC. Therefore, on loss of D4, RCIC will not auto initiate. Without the inverter, RCIC cannot be started manually from the control room.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 54

Question: Due to challenges experienced during training scenarios, operators are requesting that the ADS 105 second timer be changed to a 240 second timer. Which of the following Plant Design Changes would be initiated to accomplish this?

- a. A minor temporary modification.
- b. A minor permanent modification.
- c. A major temporary modification.
- d. A major permanent modification.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 54  
Reference: NOP83E1  
Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 2180002.2.5 (2.7)

CFR: 43.3  
License Level (R/S/B): S

Question Level: M

Question Source: New

Lesson Plan: O-RO-04

Objective:

Justification: To be a minor modification, it has to meet very restrictive criteria, therefore, 'a' and 'b' are incorrect. By procedure you are not allowed to have a temporary modification if it requires a Tech. Spec. amendment. Since this mod would need a Tech. Spec. amendment, the answer is 'd'.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 55

Question: ADS has actuated due to a loss of coolant accident. The following conditions exist:

- Reactor Pressure: 900 psig
- Drywell Pressure: 12 psig
- RPV Level: -60 inches
- 'A' RHR pump is providing torus sprays; all other low pressure ECCS pumps are not operating
- All 4 SRV's are open due to the ADS actuation

While shifting 'A' RHR to drywell sprays, the operator accidentally trips the 'A' RHR pump. The expected response of the ADS System is:

- a. the ADS blowdown will continue.
- b. all 4 SRV's will close and remain closed indefinitely.
- c. all 4 SRV's will close, but will immediately reopen.
- d. all 4 SRV's will close then reopen after a two minute time delay.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 55

Reference: ADS Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 218000K1.01 (4.1)

CFR: 41.8  
License Level (R/S/B): R

Question Level: C

Question Source: Bank #43

Lesson Plan: O-RO-02-09-05  
Objective: EO-15

Justification: Once ADS initiates, loss of ECCS pumps would not terminate the  
blowdown.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 56

Question: With a high drywell pressure (>2.2 psig) condition, taking the switches for the torus or drywell 2" vent valves (AO-5041/5043 A/B) to "EMERG OPEN" will open the vent valves UNLESS:

- a. C-19 Panel alarm comes in.
- b. Reactor level is less than -46".
- c. Reactor Building Exhaust Radiation monitors are reading 710 cps.
- d. Refuel Floor Vent Radiation monitors are reading >16 mr/hr.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 56

Reference: PNPS 5.4.6

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1

K/A and Imp: 223001A2.07 (4.3)

CFR: 41.9

License Level (R/S/B): R

Question Level: M

Question Source: Bank #3141

Lesson Plan: O-RO-02-08-02

Objective: EO-27b

Justification: EMERG OPEN does not override a -46" signal. 'a', 'c' and 'd' represent conditions where a radiation release is indicated, which could possibly isolate the valve.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 57

Question: WHICH ONE (1) of the following represents the sequence of procedural actions necessary to reset a Reactor Building Isolation that has been caused by a refuel floor high radiation condition? (Assume the high refuel floor radiation signal has cleared.)

- a. Perform reset using PCIS 2, 3, 6 ISOL RESET on C905, then Reposition control switches for dampers and equipment, then Perform reset using RBIS TRIP RESET on C7.
- b. Perform reset using RBIS TRIP RESET on C7. Perform reset using PCIS 2, 3, 6 ISOL RESET on C905, then Reposition control switches for dampers and equipment
- c. Reposition control switches for dampers and equipment, then Perform reset using PCIS 2, 3, 6 ISOL RESET on C905, then Perform reset using RBIS TRIP RESET on C7
- d. Reposition control switches for dampers and equipment, then Perform reset using RBIS TRIP RESET on C7, then Perform reset using PCIS 2, 3, 6 ISOL RESET on C905

Answer: c

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 57

Reference: 2.2.125.1 Secondary

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1

K/A and Imp: 2230022.1.9 (4.0)

CFR: 41.7

License Level (R/S/B): R

Question Level: M

Question Source: Bank #92

Lesson Plan: O-RO-02-08-05

Objective: EO-16

Justification: The proper sequence for performance of an isolation reset is not required to be memorized to perform, however, it is expected that an examinee could logically derive the correct sequence based on system understanding that only 'c' would be successful in resetting the isolation.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 58

Question:

The plant is operating at 100% power. The control room operator accidentally attempted to open the Upper Drywell Spray Valve #1 (MO-1001-23A). Will the valve open, and why or why not?

- a. Yes. The drywell spray valves can be opened if a LPCI initiation signal is not present.
- b. Yes. The drywell spray valves are interlocked such that one valve can be opened under any condition as long as the other valve is closed.
- c. No. The drywell spray valves cannot be opened unless a LPCI initiation signal exists.
- d. No. The drywell spray valves cannot be opened unless drywell pressure is equal to or greater than 1.8 psig.

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 58

Reference: RHR Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 226001A2.20 (4.1)

CFR: 41.7

License Level (R/S/B): R

Question Level: M

Question Source: Bank #2475

Lesson Plan: O-RO-02-09-01

Objective: EO-14

Justification: 'a' is correct. 'b', 'c' and 'd' are plausible if examinee doesn't understand operation of the spray valve interlock.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 59

Question: Drywell spray was initiated in accordance with EOP-03. As drywell temperature and pressure are lowering, the unacceptable region on the Drywell Spray Initiation Limit curve is entered at a drywell temperature of 250 deg. F.

Which ONE of the following is a REQUIRED action?

- a. Secure drywell spray when drywell pressure drops below 2.2 psig.
- b. Secure drywell spray when torus bottom pressure drops below 2.2 psig.
- c. Adjust drywell spray as necessary to maintain operation within the Drywell Spray Initiation limit curve.
- d. Immediately secure drywell spray.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 59

Reference: EOP-03

Exam Reference

Provided To Candidate: EOP-03 without entry conditions

SRO Tier # / SRO Gr 2/1

K/A and Imp: 226001A4.20 (3.8)

CFR: 43.5

License Level (R/S/B): S

Question Level: M

Question Source: Bank #3327

Lesson Plan: O-RO-03-04-05

Objective: EO-7

Justification: This tests an understanding about the basis of the DSIL curve is only for initiation of containment sprays and not for securing sprays

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 60

Question: SRV 3B has failed open due to an electrical malfunction. The CRS directs an NLNPRO to open breaker #1 on D4, breaker #1 on D5. Which of the following is the basis for this strategy?

- a. De-energizes the ADS logic to allow inhibiting ADS prior to re-energizing the logic.
- b. Causes control for the SRV's to transfer to the Alternate Shutdown Panels (C156/C157) so that local control can be established.
- c. De-energizes the SRV solenoids to close the affected SRV and allow time for local control to be established at the Alternate Shutdown Panels (C156/C157).
- d. Prevents an electrical fault in the ADS or SRV circuitry from possibly causing a loss of 125 VDC bus D4 or D5.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 60

Reference: PNPS 2.4.29, Stuck Open SRV

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1

K/A and Imp: 239002K2.01 (3.2)

CFR: 43.5

License Level (R/S/B): S

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-04-01

Objective: EO-25

Justification: Although the indicated action is a subsequent action, an SRO candidate should have an understanding of the strategy of accomplishing an abnormal procedure step. 'a', 'b' and 'd' are plausible if an SRO candidate does not understand the reason for the step.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 61

Question: While operating at 100% reactor power, reactor pressure starts to oscillate approximately 10 psi peak-to-peak and pressure control is shifting alternately from the EPR to the MPR and back to the EPR.

What is the first action that is required?

- a. Check EPR filter differential pressure
- b. Reduce reactor power to approximately 75%.
- c. Raise the MPR setpoint to prevent pressure control from swapping between regulators.
- d. Lower the MPR setpoint to allow the MPR to take control of pressure.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 61

Reference: 2.4.37 Turbine Control Malfunctions

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 241000A4.02 (4.1)

CFR: 41.5  
License Level (R/S/B): R

Question Level: M

Question Source: Bank #3316

Lesson Plan: O-RO-02-05-04  
Objective: EO-26

Justification: 'd' is an immediate operator action for pressure oscillations. 'a', 'b' and 'c' are plausible remedies for a pressure oscillation, but are incorrect.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 62

Question: The plant is operating at 100% power with the 'B' feedwater level instrument selected. The 'B' feedwater level instrument variable leg ruptures. Which of the following will occur?

- a. High RPV level alarm and all reactor feed pumps will trip on high level.
- b. Low RPV level alarm and the main turbine will trip on high level.
- c. High RPV level alarm and the reactor will scram on low level.
- d. Low RPV level alarm and reactor level will stabilize at a high level below the turbine trip setpoint.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 62

Reference: FWLC Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 259002K5.03 (3.2)

CFR: 41.7  
License Level (R/S/B): R

Question Level: C

Question Source: Bank #3985

Lesson Plan: O-RO-02-04-10  
Objective: EO-25

Justification: Examinee must evaluate effect of a variable leg rupture. After concluding that the instrument fails low, the examinee needs to evaluate the interrelationship between that level instrument with alarms, FWLC, feed pumps, and the main turbine.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 63

Question: The 'A' SBTG train was manually started and has been running for about one hour when an NLNPRO informs you that painting is taking place in the Reactor Building. (Same area that SBTG is operating on.) Choose the actions you are required to take.

- a. Perform an inplace DOP test and laboratory analysis on the 'A' train. Analysis must be verified within 31 days or declare the train inoperable.
- b. Perform an inplace DOP test and laboratory analysis on both 'A' and 'B' trains. The analysis must be verified within 36 hours or the reactor shall be shut down.
- c. Declare the 'A' train inoperable and immediately demonstrate the operability of all active components of the 'B' train.
- d. Declare the 'A' train inoperable and within 2 hours demonstrate the operability of all active components of the 'B' train.

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 63

Reference: Tech. Specs. 4.7.B.2.b.1

Exam Reference  
Provided To Candidate: Tech. Specs. without definitions or bases

SRO Tier # / SRO Gr 2/1

K/A and Imp: 2610002.1.33 (4.0)

CFR: 43.2

License Level (R/S/B): S

Question Level: C

Question Source: Bank #305

Lesson Plan: O-RO-02-06-06

Objective: EO-17

Justification: If painting is performed, Tech. Spec. surveillances require a DOP test to be performed. SBGT is not considered inop unless test results are not determined in 31 days.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 64

Question: With the plant operating at rated conditions, a manual reactor scram is initiated. Fifteen (15) seconds after the scram was initiated the following is reported:

A1 - energized from UAT  
A2 - energized from UAT  
A3 - energized from UAT  
A4 - energized from UAT  
A5 - energized from 'A' EDG  
A6 - energized from 'B' EDG

The reason for this condition is:

- a. A generator lockout has occurred.
- b. The Startup Transformer is de-energized.
- c. The 'A' Backup Scram Valve did not energize.
- d. The Turbine Lockout Relay has failed to actuate.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 64  
Reference: PNPS 2.2.6, 2.2.99  
Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1  
K/A and Imp: 262001K1.03 (3.8)

CFR: 41.5  
License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #740

Lesson Plan: O-RO-02-01-05  
Objective: EO-10

Justification: Scram causes A5/A6 aux transformer feeders to immediately trip. If a failure to transfer occurred, A5/A6 would have transferred to the S/D transformer. On loss of S/U transformer, EDG's auto start explaining why A5/A6 being supplied by EDG.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID:

65

Question: What impact does a loss of off-site power and subsequent LOCA have on the operation of the Emergency Diesel Generators?

- a. Power will be lost to the EDG day tank fuel oil transfer pumps.
- b. Power will be lost to the jacket water circulating pump.
- c. Power will be lost to the diesel generator air compressors.
- d. Power will be lost to the EDG field flash relays.

Answer:

c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 65  
Reference: Emergency AC Distribution Reference Text  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 2/1  
K/A and Imp: 264000A2.06 (3.4)  
  
CFR: 41.8  
License Level (R/S/B): R  
  
Question Level: M  
  
Question Source: Bank #3210  
  
Lesson Plan: O-RO-02-09-08  
Objective: EO-6  
  
Justification: Only load listed that is affected by a load shed is the air compressors.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 66

Question: Which of the following signals would cause a Reactor Building Isolation Signal (RBIS), but NOT a PCIS Group II isolation?

- a. Refuel Floor Vent Hi Radiation
- b. Reactor Building Exhaust Hi Radiation
- c. Reactor Low Level
- d. High Drywell Pressure

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 66

Reference: PCIS Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/1

K/A and Imp: 290001A3.01 (4.0)

CFR: 41.9

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-08-10

Objective: EO-3

Justification: Only 'a' causes just an RBIS. 'b' has no auto function. 'c' and 'd' causes both a Group II signal and an RBIS.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 67

Question: A loss of power to the 'A' RPS would cause a loss of power to which of the following RPS solenoids?

- a. 'A' scram pilot solenoid valves (SV-117) only.
- b. 'A' scram pilot solenoid valves (SV-117) and 'A' SDV vent and drain valve pilot solenoid valves (SV-20A, SV-20C, SV-21A, SV-21C) only.
- c. 'A' scram pilot solenoid valves and the 'A' backup scram solenoid valve (SV-19A) only.
- d. All 'A' scram pilot solenoid valves, 'A' SDV vent and drain valve pilot solenoid valves, and the 'A' backup scram solenoid valve.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 67

Reference: RPS Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 201001K2.02 (3.7)

CFR: 41.6

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-07-07

Objective: EO-22f

Justification: 'c' and 'd' incorrect because backup scram valve is DC powered. 'a' is incorrect because RPS supplies more than just the pilot solenoid valves.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 68

Question: During an approach to criticality, a RMCS timer malfunction alarm is received and the red timer malfunction light on C905 energizes.

Which of the following indications would be observed for this condition?

- a. Control rod withdraw block alarm comes in and white rod out permissive light goes out.
- b. Select matrix deselects currently selected rod as indicated by select matrix pushbutton de-energizing.
- c. Rod select relay deselects the currently selected rod as indicated by the white select light on the full core display de-energizing.
- d. The RWM indicates a select error and withdraw block on the selected rod.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 68

Reference: RMCS Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 201002A2.03 (2.8)

CFR: 41.6

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-06-08

Objective: EO-2f

Justification: A timer malfunction results in an automatic action which gives the symptoms in 'c'.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 69

Question: A plant shutdown is in progress. Reactor power is 5%.

Given the following pull sheet data:

Step	Group	Rod	Move From/To Position	Current
27	8	14 - 39	08 to 12	12
		38 - 39	08 to 12	10
		38 - 15	08 to 12	08
		14 - 15	08 to 12	08
28	9	22 - 31	08 to 12	10
		30 - 31	08 to 12	08
		30 - 23	08 to 12	08
		22 - 23	08 to 12	08

Given the following RWM indications:

Latch step 27  
Selected rod 38-39  
Error status No errors indicated  
Rod block status No rod blocks present

Under these conditions, the Rod Worth Minimizer has failed to detect:

- an insert error. Since the RWM is inoperable, the reactor can only be shut down by manually scramming the reactor.
- an insert error. Rod 22-31 should be inserted to position 08 and the shutdown may continue.
- a withdraw error. Since the RWM is inoperable, the reactor can only be shut down by manually scramming the reactor.
- a withdraw error. Rod 22-31 should be inserted to position 08 and the shutdown may continue.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 69

Reference: RWM Reference Text and Tech Spec 3.3.B.3

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2  
K/A and Imp: 201006K4.03 (3.4)

CFR: 43.2  
License Level (R/S/B): S

Question Level: C

Question Source: Modified Bank #298

Lesson Plan: O-RO-02-07-06  
Objective: EO-2i

Justification: Since Step 27 is latched, rod 22-31 is a withdraw error that was not detected by the RWM. 'd' includes the proper LCO for an inoperative RWM.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 70

Question: What automatic protective function is generated by the Rod Position Information System (RPIS) upon sensing a loss of electrical power?

- a. Select Block only
- b. Withdrawal Block only
- c. Insert Block only
- d. Insert and Withdrawal Blocks

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 70

Reference: RPIS Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 214000K6.01 (2.6)

CFR: 41.7

License Level (R/S/B): R

Question Level: M

Question Source: Bank #2360

Lesson Plan: O-RO-02-06-04

Objective: EO-7b

Justification: An RPIS malfunction caused by a loss of power causes a select block.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 71

Question: During rod movements the next control rod in a sequence is selected. The Rod Block Monitor receives a signal that a "4 string" rod has been selected, but due to a failure in the Reactor Manual Control System (RMCS), no LPRM signals are passed through RMCS to the Rod Block Monitor System.

Which of the following is the expected Rod Block Monitor response to this condition?

- a. Inop trip and a rod select block.
- b. Inop trip and control rod withdraw block.
- c. Auto bypass all LPRM inputs to prevent a protective trip.
- d. Auto bypass the RBM to prevent a protective trip.

Answer: B

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 71

Reference: RBM Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 215002K3.01 (3.5)

CFR: 41.6

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-07-05

Objective: EO-13a

Justification: Sensing <50% of available inputs for the RBM causes an inop trip.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 72

Question: If the 'A' IRM is withdrawn with the mode switch in STARTUP, a control rod withdraw block will be present until:

- a. A, C, E, G IRM's are on Range 8 or above.
- b. All IRM's are on Range 8 or above.
- c. A, C and E APRM downscale trips are clear.
- d. The mode switch is in RUN.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 72

Reference: IRM Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 215003K5.01 (2.7)

CFR: 41.7

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-07-02

Objective: EO-10

Justification: Mode switch in RUN is the only bypass for the "IRM Detector Not Full In" rod block.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 73

Question: Given the following information:

An installed PDC to the RHR heat exchanger now allows a maximum flow rate of 12,000 gpm through the heat exchanger, with unlimited 2 pump operation. The safety evaluation has the prescribed procedure changes that are allowed under the PDC. You are assigned to incorporate the prescribed changes into the RHR procedure 2.2.19 and 2.2.19.5.

Note: Refer to the provided Procedure Control Form.

What administrative requirements would be associated with these procedure revisions?

NOTE: Refer to the provided Procedure Control Form.

- a. Non-intent and ORC review is NOT required.
- b. Non-intent, but ORC review is required.
- c. Intent, and ORC review is required.
- d. Intent, but ORC review is not required.

Answer: a

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 73

Reference: NOP98A1, page 12

Exam Reference  
Provided To Candidate: Procedure Control Form

SRO Tier # / SRO Gr 2/2

K/A and Imp: 2190002.2.6 (3.3)

CFR: 43.3

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-06-06-01

Objective: EO-2b

Justification: Any setpoint change that has been already approved by ORC can be incorporated into procedures as a non-intent change.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 74

Question: A spiral core reload is in progress. At the start of the reload, SRMs indicated 25 cps. With 40 peripheral bundles left to be loaded SRMs were reading 100 cps. 10 more fuel bundles were loaded and counts have now increased to 200 cps.

Assuming that each of the 40 bundles will add an equal amount of reactivity to the core when they are loaded, what outcome do you expect as the reload continues?

- a. All bundles can be loaded while maintaining Tech. Spec. shutdown margin.
- b. All bundles can be loaded, without going critical.
- c. The core will go critical only if 20 more bundles are loaded.
- d. If 10 bundles are loaded, the core will go critical if 10 more bundles are loaded.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 74

Reference: Reactor Theory - Kinetics

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 234000A1.03 (3.9)

CFR: 41.1

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-01-02-03

Objective: EO-1

Justification: Demonstrates subcritical multiplication thumbrule that "if positive reactivity inserted causes count rate to double, that same amount of reactivity is added, the reactor will become supercritical". 'c' is plausible if examinee misuses 5 count rate doubling thumbrule (i.e., 10 more bundles will cause 4th doubling, last 10 bundles will cause 5th doubling).

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 75

Question: The BALANCE position on an individual FWLC System controller is used to:

- a. adjust the bias signal to balance flows in the feedwater lines.
- b. swap an individual controller onto the Master Controller.
- c. swap an individual controller off from the Master Controller.
- d. balance the feed flow through the two main feed regulating valves.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 75

Reference: FWLC Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 259001A4.05 (3.9)

CFR: 41.4

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-04-10

Objective: EO-13

Justification: Tests an understanding of the operation of the controls on an feed regulating valve individual controller.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 76

Question: During 100% power operations, the following AOG alarm is received:

Recombiner Temp Hi/Lo CP600L-A4

Hydrogen concentration is steady at 0.1%. The in service recombiner outlet temperature is now equal to the recombiner inlet temperature. Which of the following would cause these symptoms?

- a. Wetting of the recombiner.
- b. Premature H<sub>2</sub> recombination upstream of the recombiner.
- c. Loss of steam flow to the recombiner preheater.
- d. Increased jet compressor steam dilution flow.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 76

Reference: PNPS 2.4.141, Abnormal Recombiner Operation

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 271000A4.06 (3.2)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-04-11

Objective: EO-9e

Justification: Diagnosis will lead to conclusion in 'b'.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 77

Question: During full power operations, both Main Stack radiation monitors (1705-18) indicate increasing radiation levels.

Which one of the following could be the cause for this indication to increase?

- a. Reduced hydrogen injection into the reactor coolant.
- b. Closure of the main condenser vapor valves.
- c. High recombiner temperature.
- d. Loss of both stack dilution fans.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 77

Reference: AOG Reference Text, Section E.1

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2  
K/A and Imp: 272000A3.07 (2.9)

CFR: 41.11  
License Level (R/S/B): R

Question Level: C

Question Source: Bank #34

Lesson Plan: O-RO-02-04-11  
Objective: EO-6h

Justification: 'd' is the only answer that would cause the rad monitor to sense a higher rad level.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 78

Question: Following a complete loss of TBCCW, the operating crew notices the control room ambient temperature rising. The reason for the rise in control room temperature is due to:

- a. additional control room heat load caused by the rise in temperature in the Turbine Building.
- b. loss of cooling water to the control room air conditioning units.
- c. loss of instrument air causing control room temperature control dampers to fail to maximum heat position.
- d. loss of instrument air causing the outside air damper to fail open.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 78

Reference: Control Room HVAC Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2

K/A and Imp: 290003K6.02 (2.9)

CFR: 41.4

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-02-03

Objective: EO-10

Justification: TBCCW supplies cooling to the air conditioning refrigerant. 'a', 'c' and 'd' are incorrect, but plausible.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 79

Question: What actions would be directed during refueling operations if a loss of high pressure service air was lost to the refueling bridge?

- a. Secure refueling operations until high pressure service air is restored.
- b. Place the refueling bridge air compressor in service.
- c. Place the refueling bridge air compressor in service only if a fuel pool or basin drain occurs concurrently.
- d. Secure refueling operations. Request maintenance to install the refueling bridge air compressor. Upon installation, place the air compressor in service to continue refueling operations.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 79

Reference: PNPS 2.2.75

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/2  
K/A and Imp: 3000002.2.29 (3.8)

CFR: 41.10  
License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-08-06  
Objective: EO-11c

Justification: 'b' represents the purpose of the refueling bridge air compressor.  
Use of this air compressor is optional during refueling operations.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 80

Question: The unit is operating at 100% power near the end of cycle with all control rods fully withdrawn. The scram inlet valve (CRD-AOV-126) for control rod 30-31 opens.

Which one of the following describes the response of the plant over the next five (5) minutes, including why?

Reactor power will:

- a. remain at 100% reactor power. NO control rod motion will occur. NO leakage into the scram discharge volume will occur.
- b. lower, but the plant will continue to operate at power. The associated control rod will insert. NO leakage into the scram discharge volume will occur.
- c. lower, but the plant will continue to operate at power. The associated control rod will insert. The scram valve will leak into the scram discharge volume, but NO scram will occur as the scram discharge volume drain capacity exceeds the leakage from the scram valve.
- d. be downscale on APRMs. The reactor will scram due to high scram discharge volume level.

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 80

Reference: RPS Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/3

K/A and Imp: 201003A1.01 (3.8)

CFR: 41.6

License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-06-11

Objective: EO-10

Justification: Opening the scram inlet valve will cause sufficient differential pressure to cause the control to go full in.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 81

Question: A TIP trace is being performed when a high drywell pressure signal occurs. Select the expected automatic action.

- a. The shear valve fires with the detector still in the core.
- b. The ball valve closes with the detector still in the core.
- c. The detector withdraws into its shield and the ball valve closes.
- d. The detector withdraws into its shield and the shear valve fires.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 81

Reference: TIP Reference Text

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/3  
K/A and Imp: 215001A3.01 (2.5)

CFR: 41.7  
License Level (R/S/B): R

Question Level: M

Question Source: Bank #3276

Lesson Plan: O-RO-02-07-08  
Objective: EO-4

Justification: 'c' is an auto action associated with a Group II isolation.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 82

Question: With reactor power at 70%, one outboard MSIV closes. For plant operation to continue with one outboard MSIV closed, which one of the following actions MUST be taken?

- a. The corresponding inboard MSIV must be closed within 1 hour.
- b. Reactor power must be reduced until reactor pressure is less than or equal to 1035 psig.
- c. The MO-220-3 (Main Steam Line Drain Valve) must be opened and the MO-220-4 (Main Steam Line Drain to CNDR) throttled open.
- d. The EPR main steam line resonance compensator must be recalibrated for 3 steam lines.

Answer: c

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 82

Reference: PNPS 2.2.92, Main Steam System

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/3  
K/A and Imp: 239001K4.10 (3.0)

CFR: 41.4  
License Level (R/S/B): R

Question Level: M

Question Source: Modified Bank #3293

Lesson Plan: O-RO-02-04-01  
Objective: EO-18

Justification: 'c' is a procedural requirement to prevent moisture in an isolated steam line from entering the main turbine.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 83

Question: Following a heatup to rated pressure, a loss of instrument air occurs. The reactor is scrammed. Fifteen minutes after the scram, a BOP operator reports main steam tunnel temperature is 140 deg. F and rising. This is due to:

- a. the RBCCW temperature control valve failing open.
- b. the scram discharge volume vent and drain valves failing open.
- c. outboard MSIV's drifting closed.
- d. reactor building dampers failing closed.

Answer: d

*Weak Distractors (skew)*

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 83

Reference: RB HVAC

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 2/3

K/A and Imp: 288000K6.03 (2.7)

CFR: 41.7

License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-02-08-05

Objective: EO-14a

Justification: A reactor building isolation results in much lower ventilation in the steam tunnel which causes steam tunnel temp to rise. 'a', 'b' and 'c' are plausible, but incorrect.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 84

Question: Reactor level is +30" on the feedwater range level indication and steady. On the SPDS Critical Plant Variables Display, the digital readout for RPV "ACTUAL LEVEL" is displayed in YELLOW numbers reading +32" and surrounded by a YELLOW border. This is because:

- a. The SPDS calculated RPV water level is 2" different than the feedwater level range.
- b. The SPDS calculated RPV water level has reached the high level alarm setpoint.
- c. The SPDS calculated RPV water level has NOT been validated.
- d. The SPDS calculated RPV water level has been validated.

Answer: c

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 84  
Reference: PNPS 2.6.1, page 27  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 3/0  
K/A and Imp: 2.1.19 (3.0)  
  
CFR: 41.7  
License Level (R/S/B): R  
  
Question Level: M  
  
Question Source: Modified Bank #788  
  
Lesson Plan: O-RO-02-11-01  
Objective: EO-6  
  
Justification: Yellow is standard color for a computer point that can't be validated.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 85

Question: During an outage with the plant in cold shutdown and shutdown cooling in service, the following conditions exist:

Both Standby Gas Treatment fans are tagged out of service  
Both reactor recirc pumps are secured  
RHR heat exchanger inlet temperature is 190 deg. F.  
Reactor level is +30"

A loss of shutdown cooling occurs. One hour after the loss of SDC, the crew notes an increase in the vessel head temperature to 225 deg. F and receives reports of steam entering the drywell equipment drain sump. The crew checks RWCU inlet temperature and notes RWCU inlet temperature is 192 deg. F.  
Under these conditions:

- a. Secondary containment is NOT established, and is NOT required.
- b. Secondary containment is NOT established and is required.
- c. Secondary containment is established, but is NOT required.
- d. Secondary containment is established and is required.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 85

Reference: Tech. Spec. definitions and Tech. Spec. Section 3.7.C.1  
PNPS 2.4.25

Exam Reference  
Provided To Candidate: Tech Specs w/o definitions or bases

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.1.22 (3.3)

CFR: 43.2

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-09-01

Objective: EO-21

Justification: Conditions indicate steaming in the reactor vessel which constitutes a mode change requiring secondary containment integrity. Secondary containment integrity is not established because SBGT is inoperable. Therefore, 'b' is correct.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 85

Question: During an outage with the plant in cold shutdown and shutdown cooling in service, the following conditions exist:

Both Standby Gas Treatment fans are tagged out of service  
Both reactor recirc pumps are secured  
RHR heat exchanger inlet temperature is 190 deg. F.  
Reactor level is +30"

A loss of shutdown cooling occurs. One hour after the loss of SDC, the crew notes an increase in the vessel head temperature to 225 deg. F and receives reports of steam entering the drywell equipment drain sump. The crew checks RWCU inlet temperature and notes RWCU inlet temperature is 192 deg. F. Under these conditions:

- a. Secondary containment is NOT established, and is NOT required.
- b. Secondary containment is NOT established and is required.
- c. Secondary containment is established, but is NOT required.
- d. Secondary containment is established and is required.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 85

Reference: Tech. Spec. definitions and Tech. Spec. Section 3.7.C.1  
PNPS 2.4.25

Exam Reference  
Provided To Candidate: Tech Specs w/o definitions or bases

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.1.22 (3.3)

CFR: 43.2

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-02-09-01

Objective: EO-21

Justification: Conditions indicate steaming in the reactor vessel which constitutes a mode change requiring secondary containment integrity. Secondary containment integrity is not established because SBGT is inoperable. Therefore, 'b' is correct.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 86

Question: The Control Room has been evacuated due to a fire in the Control Room. Shutdown from outside the Control Room is in progress per PNPS per PNPS 2.4.143. A cooldown with SRV's has been initiated. The following data is taken at the indicated times:

Time	Pressure	Time	Pressure
00:00	1000 psig	00:50	600 psig
00:10	920 psig	01:00	520 psig
00:20	840 psig	01:10	440 psig
00:30	760 psig	01:20	360 psig
00:40	680 psig	01:30	280 psig

Determine which of the following is correct:

Note: Refer to the provided PNPS 2.4.143, Appendix L Curve 1

- a. - The cooldown rate over the last hour averaged less than 90 deg/hr  
- The current cooldown rate is less than 90 deg/hr  
- Maintain present cooldown rate
- b. - The cooldown rate since the cooldown began has averaged less than 90 deg/hr  
- The current cooldown rate is less than 90 deg/hr
- c. - The cooldown rate over the last hour averaged less than 90 deg/hr  
- The current cooldown rate is greater than 90 deg/hr  
- Present cooldown rate can be maintained for 10 minutes more prior to reducing cooldown rate without exceeding 90 deg/hr
- d. - The cooldown rate over the last hour is greater than 90 deg/hr  
- The current cooldown rate is greater than 90 deg/hr  
- Cooldown rate should be reduced immediately

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 86

Reference: PNPS 2.4.143, Appendix L

Exam Reference

Provided To Candidate: PNPS 2.4.143, Appendix L Curve 1

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.1.25 (3.1)

CFR: 41.5

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #3220

Lesson Plan: O-RO-01-03-10

Objective: EO-11

Justification: The answer can be derived by plotting the points on curve 1 and interpreting the slope compared to the 90 deg./hr. slope.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 87

Question: Following a loss of off-site power, the following conditions exist:

The reactor is shutdown and control room personnel are attempting to control RPV pressure and level per EOP-01.

The RPV is depressurizing due to a small break in the recirc system.

RCIC is being used for level control and it has just enough capacity to keep up with the break.

RPV level is at -28" and stable.

HPCI is out of service.

The cooldown rate is greater than 100 degrees F per hour due to the break and RCIC turbine operation.

What action should be performed in this situation?

- a. Lower RCIC flow rate and cautiously allow RPV level to lower. Do not allow cooldown rate exceed 100 degrees F per hour. Maintaining cooldown rate less than 100 degrees F per hour has a higher priority than maintaining RPV level above TAF.
- b. Open all SRV's to rapidly lower pressure and make low pressure ECCS systems available.
- c. Continue to monitor Rx level and cooldown rate, but do not reduce RCIC flow rate. Maintaining RPV level above TAF has a higher priority than maintaining cooldown rate less than 100 degrees F per hour.
- d. Alternate between maintaining RPV level and maintaining cool down rate. Both parameters have equal importance and neither limit should be exceeded at the expense of the other.

Answer: c

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 87

Reference: EOP-01 level and pressure legs

Exam Reference  
Provided To Candidate: EOP's w/o entry conditions

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.1.32 (3.8)

CFR: 43.5

License Level (R/S/B): S

Question Level: C

Question Source: Bank #2343

Lesson Plan: O-RO-03-04-03

Objective: EO-22

Justification: This question tests an SRO's understanding of prioritizing level and pressure control in EOP-01. Adequate core cooling is a higher priority than excessive cooldown rate.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 88

Question: PNPS is in an ATWS condition. Reactor power is 15% and SLC has been initiated. The MSIVs were manually closed due to a loss of all condensate pumps. SRVs are being used for pressure control. Plant conditions:

Reactor Water Level	-30 inches
Drywell Pressure	0.7 psig
Torus Pool Temp.	Above BIIT
Torus Pool Level	129 inches
Main Condenser Vacuum	16 inches Hg
Seawater Pumps	Running

Which of the following systems are currently allowed to be used to assist in reactor pressure control:

- a. RCIC
- b. HPCI
- c. RWCU
- d. Main Steam Line Drains

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 88  
Reference: EOP-02  
Exam Reference  
Provided To Candidate: EOP's w/o entry conditions

SRO Tier # / SRO Gr 3/0  
K/A and Imp: 2.1.6 (4.3)

CFR: 41.10  
License Level (R/S/B): R

Question Level: C

Question Source: Bank #3177

Lesson Plan: O-RO-03-04-04

Objective: EO-25b

Justification: HPCI and RCIC are not available because injection is required to be terminated and prevented with the given conditions. RWCU is isolated due to SBLC injection.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 89

Question: OPER-2, "Cold Startup System Checklist" must be initiated:

- a. whenever starting up from cold shutdown.
- b. only after a refueling outage.
- c. only after an outage that lasts less than three months.
- d. after a refueling outage or after an extended outage that lasts greater than three months.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 89  
Reference: PNPS 2.1.1  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 3/0  
K/A and Imp: 2.2.1 (3.6)  
  
CFR: 43.5  
License Level (R/S/B): S  
  
Question Level: M  
  
Question Source: Bank #894  
  
Lesson Plan: O-RO-03-01-12  
Objective:  
  
Justification: OPER-02 is performed as stated in 'd'.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 90

Question: Which one of the following changes to an MR's work scope would be an intent change and would require a new MR be issued instead of revising the existing MR:

- a. While repacking a pump, a scored pump shaft is found to have caused the packing deficiency. The pump shaft needs to be replaced.
- b. During a valve repair, a snubber is found to be in the way in order to access the valve. The snubber needs to be removed.
- c. During valve repacking, water is found in the motor operator. The motor operator needs to be overhauled.
- d. Post work testing results are unsatisfactory on a replaced instrument because the setpoint is out of the prescribed range. Recalibration of the instrument is necessary.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 90

Reference: PNPS 1.5.20, pages 48 and 51

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr: 3/0

K/A and Imp: 2.2.18 (3.6)

CFR: 43.5

License Level (R/S/B): S

Question Level: C

Question Source: New

Lesson Plan: O-RO-04

Objective:

Justification: The concept of intent changes to MR's is covered in 1.5.20.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 91

Question: Troubleshooting is planned for the Core Spray System 'A' Full Flow Test Valve (MO-1400-4A). The motor operator tripped on overload while going closed. The cause of the overload is unknown. The post work testing for the troubleshooting activity:

- a. will be determined prior to beginning troubleshooting using the IST valve post work testing guidance contained in 8.I.1.1, IST Testing Program.
- b. will be determined prior to beginning troubleshooting using the matrices contained in procedure 1.13.1, Post Work Test Matrices and Guidelines.
- c. will be determined prior to beginning troubleshooting in accordance with 8.I.1.1 and 1.13.1.
- d. will be determined based on an account of the work performed during the troubleshooting activities in accordance with 8.I.1.1 and 1.13.1.

Answer: d

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 91

Reference: 3.M.1-30, page 8

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.2.21 (3.5)

CFR: 43.5

License Level (R/S/B): S

Question Level: M

Question Source: New

Lesson Plan: O-RO-04

Objective:

Justification: As given in the reference, procedure 'd' describes post work testing requirements.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 92

Question: Core offloading is in progress. All control rods are fully inserted with the Reactor Mode Switch in REFUEL.

A fuel assembly has just been released in the fuel pool and the main hoist has been raised to the Normal-Up position. The bridge is being moved from the spent fuel pool towards the core for the next fuel movement.

When should a Control Rod Block first be initiated?

- a. As soon as the bridge limit switch senses the bridge is near or over the core.
- b. When the bridge is over the core and the main hoist is lowered from the Normal-Up position.
- c. When the bridge is over the core and a fuel assembly is latched by closing the grapple hooks.
- d. When the bridge is over the core and a fuel assembly is latched and being raised.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 92  
Reference: PNPS 2.2.75  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 3/0  
K/A and Imp: 2.2.30 (3.3)  
  
CFR: 41.6  
License Level (R/S/B): R  
  
Question Level: M  
  
Question Source: Bank #3223  
  
Lesson Plan: O-RO-02-08-06  
Objective: EO-10d  
  
Justification: This tests an examinees knowledge of refueling interlocks.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 93

Question: A spiral core off-load is in progress with 100 bundles left to unload. The bridge is currently moving across the core towards the cattle chute with an irradiated bundle. The bundle is still suspended above the reactor vessel.

The refuelers are notified of a Fuel Pool Low Level alarm and notice the reactor cavity level lowering.

Which ONE of the following is the REQUIRED action?

- a. Immediately evacuate the refuel floor and leave the bundle hoisted above the reactor vessel.
- b. Return the bundle to the in-core position that it came from.
- c. Place the bundle in the nearest open in-core position.
- d. Place the bundle in the nearest open spent fuel pool position.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 93  
Reference: PNPS 2.4.31, Reactor Basin Spent Fuel Pool Drain Down  
Exam Reference  
Provided To Candidate: None  
  
SRO Tier # / SRO Gr 3/0  
K/A and Imp: 2.3.10 (3.3)  
  
CFR: 41.1  
License Level (R/S/B): R  
  
Question Level: M  
  
Question Source: Bank #3348  
  
Lesson Plan: O-RQ-03-01-03  
Objective: EO-P2  
  
Justification: 'c' is correct answer based on given conditions.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 94

Question: A steam leak in the steam tunnel has caused a Group I isolation and a reactor scram. All control rods fully insert. Following the reactor scram, the Scram Discharge Volume ruptures.

Plant conditions are as follows:

- |                                      |                    |
|--------------------------------------|--------------------|
| - PCIS Isolations                    | Group I only       |
| - RWCU & RHR Piping Area -23 ft. El. | 265 deg. F, rising |
| - SW Quadrant                        | 3 inches, rising   |
| - CRD Quadrant                       | 2 inches, rising   |
| - Reactor Building Vent Exhaust      | Hi-Hi alarm        |

What operator action is required?

- Perform an Alternate RPV Depressurization.
- Bypass and reset the scram in accordance with 5.3.23
- Isolate the Reactor Building Ventilation and initiate SBGT.
- Rapidly depressurize the reactor to the main condenser.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 94

Reference: EOP-04

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.3.11 (3.2)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #3200

Lesson Plan: O-RO-03-04-06

Objective: EO-11b

Justification: This question tests the recognition of conditions requiring the use of an override in EOP-04. Scram cannot be reset due to MSIV's being closed.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 95

Question: A Planner has determined that a work package meets criteria for performance of a "Worker Input Session."

The purpose of a "Worker Input Session" as related to the PNPS Work Control Process is to:

- a. evaluate work packages for ALARA considerations and controls.
- b. determine post work testing requirements.
- c. determine the scope of Maintenance Rule work in order to estimate SSC out of service times.
- d. determine and assign specific responsibilities to the personnel that will be executing the work package.

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 95

Reference: PNPS 1.5.20, page 66

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.3.2 (2.9)

CFR: 43.4

License Level (R/S/B): S

Question Level: M

Question Source: New

Lesson Plan: O-RO-04

Objective:

Justification: A "worker input session" was designed to improve ALARA.

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 96

Question: The plant is in a shutdown condition with two (2) SSW pumps and two (2) seawater pumps in operation. A Liquid Radwaste Discharge permit has been issued for a discharge with the radwaste effluent PRM operable. After the discharge has been started, a seawater pump trips.

Which of the following actions would be taken?

- a. Continuously monitor the Radwaste Effluent PRM. The discharge needs to be stopped only if the PRM becomes inoperable.
- b. Recalculate the discharge permit to verify the Radwaste Effluent PRM setting is conservative.
- c. Immediately reduce the discharge rate by one half and issue another discharge permit.
- d. Immediately stop the discharge and issue another discharge permit.

Answer: d

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 96

Reference: PNPS 7.9.2, page 7

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0  
K/A and Imp: 2.3.6 (3.1)

CFR: 41.13  
License Level (R/S/B): R

Question Level: M

Question Source: New

Lesson Plan: O-RO-04

Objective:

Justification: 'a', 'b' and 'c' are plausible actions for the seawater pump trip, but incorrect. Procedure 7.9.2 requires immediate stopping of the discharge.

# Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 97

Question: During 50% power operations, an MHC failure caused a reactor pressure increase. Reactor pressure is high enough to cause one SRV to remain open at its nominal setpoint. Which of the following actions are required?

- a. Scram the reactor immediately due to EOP-01
- b. Scram the reactor immediately due to EOP-02
- c. Shut off power to the EPR
- d. Scram the reactor in 5 minutes

Answer: a

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 97

Reference: EOP-01

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0  
K/A and Imp: 2.4.2 (4.1)

CFR: 41.10  
License Level (R/S/B): R

Question Level: C

Question Source: New

Lesson Plan: O-RO-03-04-03  
Objective: EO-2

Justification: Pressure to continuously lift an SRV is higher than the EOP-01 high reactor pressure entry condition. EOP-01 requires a reactor scram to be initiated.

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 98

Question: The following conditions exist:

- A manual scram was inserted from 20% power
- No other scram signals exist
- Reactor power is reading 40 on IRM Range 8 and steady
- All APRM's have downscale trips in
- Ten control rods are at position 48
- All other rods are fully inserted
- Reactor level remained at above +12" during the scram transient

Which ONE of the following is the required action:

- a. Enter PNPS 2.1.6, then execute 5.3.23 concurrently with 2.1.6.
- b. Enter EOP-01, then exit EOP-01 and enter EOP-02.
- c. Enter PNPS 2.1.6, Reactor Scram, then exit PNPS 2.1.6 and enter EOP-02.
- d. Enter PNPS 2.1.6, Reactor Scram, then enter EOP-02 and execute concurrently with PNPS 2.1.6.

Answer: c

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 98

Reference: PNPS 2.1.6, Reactor Scram

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.4.23 (3.8)

CFR: 41.10

License Level (R/S/B): R

Question Level: C

Question Source: Modified Bank #3314

Lesson Plan: O-RO-03-05-40

Objective:

Justification: Requires a recall of interrelationships between EOP-01, EOP-02 and 2.1.6. IRM's steady on range 8 means the reactor is "not shtudown".

## Pilgrim November 2000 Instant SRO Exam Key

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Question ID: 99

Question: Which of the following alarms constitutes an EOP-04 ENTRY CONDITION:

- a. 904L-F6, RBCCW Pump Area Leakage.
- b. 904LC-B5, Reactor Building Vent Rad Hi.
- c. 904LC-C7, Refuel Floor Rad Hi.
- d. C7LA1, C61 Reactor Building HVAC Trouble

Answer: b

## Pilgrim November 2000 Instant SRO Exam Key

Question ID: 99

Reference: EOP-04

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.4.45 (3.6)

CFR: 41.10

License Level (R/S/B): R

Question Level: M

Question Source: Bank #822

Lesson Plan: O-RO-03-04-06

Objective: EO-1

Justification: 'a', 'c' and 'd' represent plausible alarms that may indicate an EOP condition, but only 'b' is correct.

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 100

Question: With PNPS operating at full power, a single event results in multiple alarms being generated. Some of the alarms that are reported include:

- RHR 'B' POWER FAILURE (903R-A5)
- CORE SPRAY 'B' POWER FAILURE (903R-A7)
- RECIRC MG SET 'B' LUBE OIL PRESS LO (904R-D4)
- RECIRC MG SET 'B' DRIVE MOTOR TRIP (904R-A4)
- ECCS 'B' TROUBLE (905L-D7)
- 250V CHARGER FAILURE (C3RC-F6)
- 125V CHARGER FAILURE (C3RC-F7)
- DIVISION 2 PANEL TROUBLE (C905L-F5)
- AUX/SU XFMR A-6 SUPPLY TRIP (C3LC-E2)
- A6 UNDERVOLTAGE (C3LC-B3)

The event that has occurred is:

- a. loss of the 125 VDC 'B' Control Battery Bus.
- b. lockout on 4160 VAC bus A-6.
- c. loss of 125 VDC bus D-6.
- d. lockout of the Startup Transformer.

Answer: b

# Pilgrim November 2000 Instant SRO Exam Key

Question ID: 100

Reference: ARP C3LC-B3

Exam Reference  
Provided To Candidate: None

SRO Tier # / SRO Gr 3/0

K/A and Imp: 2.4.46 (3.6)

CFR: 41.7

License Level (R/S/B): R

Question Level: C

Question Source: Bank #802

Lesson Plan: O-RO-02-01-50

Objective: EO-7

Justification: 'a' and 'c' are not correct since a loss of DC power would not cause an A6 undervoltage condition. A lockout on the S/U transformer would also not cause a loss of power to A6.