

WNP-2 WRITTEN EXAMINATION

QUESTION # 1

EXAM KEY

10/23/2000

EX00001

The plant is in MODE 4, with the AC Distribution System in the normal shutdown lineup. RHR-P-2B is in operation in shutdown cooling. An electrical fault on SM-3 causes a Lockout on BKR S-3.

Which ONE of the following describes the effect on shutdown cooling?

RHR-P-2B trips

- A. and must be manually restarted, RHR-V-8, RHR-V-9, RHR-V-53B remain open after BKR S-3 opens.
- B. but auto starts 5 seconds after the bus is repowered from DG-2, RHR-V-8, RHR-V-9, RHR-V-53B, remain open.
- C. and must be manually restarted, RHR-V-8 closes immediately, RHR-V-9 and RHR-V-53B, close when the bus is repowered and must be opened manually.
- D. but auto starts 5 seconds after the bus is repowered from DG-2, RHR-V-8, RHR-V-9, RHR-V-53B, close when the bus is repowered.

ANSWER: C

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 295003AA1.03 4.4/4.4 10CFR55.41, 43

REFERENCE: 82-RSY-1300-T3, pages 13, 15, and 22, WNP-2 LER 96-002

SOURCE: **98 Exam – Modified** – SRO T1, G1, #2 RO T1, G2, #3
WNP-2 LER 96-002

LO: 5781

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: When S-3 locks out, an undervoltage occurs on SM-8 causing a trip of RHR-P-2B and a loss of RPS-B. The loss of RPS-B causes an inboard and outboard isolation. Since RHR-V-8 is DC powered, it closed immediately. 9 and 53B close when the bus is repowered and they all have to be opened manually. C is correct.

COMMENTS:

EX00002

WNP-2 WRITTEN EXAMINATION

QUESTION # 2

EXAM KEY

10/23/2000

RCIC is needed for adequate core cooling, but wetwell level is below the vortex limit of the pump.

Which ONE of the following describes a problem associated with operating RCIC below the vortex limits?

- A. Entrained air will cause high system flow rates resulting in a RCIC Turbine electrical overspeed trip.
- B. Operating below the vortex limit will result in high local cool down rates and uneven cooling of the suppression pool.
- C. Entrained air will cause flow induced vibration in the Head Spray line, which can result in Head Spray failure.
- D. If RCIC is secured, entrained air could collect at system high points causing water hammer during subsequent restarts.

ANSWER: D

QUESTION TYPE: SRO

KA # & KA VALUE: 295030EK1.02 3.5/3.8 10CFR55.41

REFERENCE: PPM 5.0.10, rev 6, page 97

SOURCE: **98 EXAM – MODIFIED** - SRO T1, G1, #17

LO: 8388

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: A, B, and C are all descriptions of conditions that do not occur as the result of operation below vortex limits.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 3

EXAM KEY

10/23/2000

EX00003

The plant is operating at rated power, when a fault causes an automatic power reduction to approximately 60% of rated.

Which ONE of the following would result in these conditions?

- A. SH-6 trip.
- B. SM-1 trip.
- C. SM-3 trip
- D. SM-8 trip

ANSWER: A

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 202001K2.01 3.2/3.3 10CFR55.41

REFERENCE: 82-RSY-1000-T1 page 33

SOURCE: **98 EXAM** – ex98068 - SRO T2, G2, #2 RO T2, G2, #3

LO: 5030

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A is correct because the loss of RRC-P-1B would result in a power reduction to approximately 60% power. B and C would most likely cause a full scram due to a loss of suction pressure trip on the feedpumps (with no operator action). D would cause a 1/2 scram but no reduction in power.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 4

EXAM KEY

10/23/2000

EX00004

The reactor is at rated power with TIP Channel C inserted for LPRM calibration, when a loss of SM-1 occurs.

Assuming no operator action, which ONE of the following is correct?

- A. The TIP drive continues to insert the detector to the Core Top Limit and completes the Tip trace. The detector then withdraws into the shield chamber and the ball valve closes.
- B. Immediately on receipt of the -50 inches signal, the squib valve fires, isolating the drive mechanism.
- C. The inserted TIP detector withdraws into the shield chamber, the ball valve closes, and TIP-V-15, Tip Purge Isolation Valve closes.
- D. The inserted TIP detector stops until power is restored to SM-1 and then completes the TIP trace.

ANSWER: C

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 215001K4.01 2.9/3.3 10CFR55.41

REFERENCE: LO000155 page 12 and 15

SOURCE: **98 Exam ex98081- Modified** - SRO T2, G3, #2 RO T2, G3, #1

LO: 6989

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the drive does not continue for a complete trace. B is incorrect because the squib does not fire on and isolation signal. D is incorrect because the loss of power has no direct affect on the TIP drive.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 5

EXAM KEY

10/23/2000

EX00005

The plant was operating at 98% power when a Station Blackout occurred. The following conditions exist:

4 control rods failed to insert fully
Reactor Level -172 inches

Which ONE of the following describes the required Tech Spec actions for these conditions?

- A. Initiate action within 1 hour to restore level to greater than -129 inches.
- B. Within 1 hour, restore reactor level to greater than + 13 inches and insert all insertable control rods.
- C. Within 2 hours, restore reactor level greater than -161 inches and insert all insertable control rods.
- D. Initiate action within 2 hours to restore level to greater than -129 inches.

ANSWER: C

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 2.2.22 3.4/4.1 10CFR55.45

REFERENCE: TS 2.1

SOURCE: **98 Exam ex98092 - MODIFIED - SRO T3, #7 RO T3, #6 WNP-2 IPE**

LO: 6934

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: C is correct because reactor level less than TAF exceeds a Safety Limit. C is the TS requirement for exceeding the reactor level SL.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 6

EXAM KEY

10/23/2000

EX00006

You have directed an equipment operator to operate a valve in a high radiation area for maintenance. The job is projected to take 15 minutes. The operator has received 937 mrem TEDE during the present quarter and 1011 mrem TEDE during the previous 3 quarters.

Which ONE of the following is correct for these conditions?

- A. Complete an Increased Exposure Request for the equipment operator following completion of the job.
- B. Complete an Increased Exposure Request for the equipment operator prior to the start of the job.
- C. No action is required until the operator exceeds 5 rem TEDE for the year.
- D. No action is required until the operator exceeds 1 rem TEDE for the present quarter.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 2.3.4 2.5/3.1 10CFR55.43

REFERENCE: GEN-RPP-07 rev 3, page 8

SOURCE: **NEW QUESTION** - SRO T3, #11

LO: 6025

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: WNP-2 has an administrative hold point of 2 rem TEDE for a year. Prior to exceeding the hold point, an Increased Exposure Request for must be submitted by the employee's supervisor. B is correct. A is incorrect because the approval must be given prior to exceeding the admin limit. C is incorrect because action must be taken long before exceeding 5 rem. D is incorrect because there is no 1 rem quarterly admin hold point.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 7

EXAM KEY

10/23/2000

EX00007

A Site Area Emergency was declared 2 hours ago due to reactor water level less than TAF. Fuel Damage has occurred. Reactor level has been recovered to the normal control band and the FAZ Recovery Procedure is being performed by the BOP CRO. The CRO has asked you as the CRS for permission to reset Isolation Logic A&B and C&D pushbuttons on H13-P601.

Which ONE of the following is correct for these conditions?

- A. The CRS is allowed to approve the request for resetting the Isolation logic.
- B. Contact the Emergency Director for concurrence prior to resetting the isolation logic.
- C. The VP/General Plant Manager has to approve the request for reset of the isolation logic.
- D. Contact the Recovery Manager for concurrence prior to resetting the isolation logic.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 2.4.11 3.4/3.6 10CFR55.41, 43

REFERENCE: PPM 1.3.1 rev 46, page 30

SOURCE: **NEW QUESTION** SRO T3, #16

LO: 8044

RATING: H4

ATTACHMENT: None

JUSTIFICATION: The abnormal for FAZ Recovery gives direction for the ED and SM/CRS to give permission for any reset for the isolation logic. However, PPM 1.3.1 directs that once an Emergency Classification has occurred, any actions that have the potential for rad release to the environment must have the concurrence of the ED. This step specifically includes actions listed in the FAZ Recovery procedure.

COMMENTS: This KA is common for both SRO and RO exams. This knowledge is beyond the scope of that expected of the RO. Do not use this question on the RO exam.

WNP-2 WRITTEN EXAMINATION

QUESTION # 8

EXAM KEY

10/23/2000

EX00008

The plant is operating at power. Wind speeds are currently gusting 35 mph to 45 mph and are expected to continue for the rest of the shift. Periodic SEC PRESS CONTR A Δ P HIGH/LOW alarms are being received. Following investigation, the cause is determined to be gusting winds. The CRS has been informed and no actions are required by the ARP.

Which ONE of the following is correct for each subsequent SEC PRESS CONTR A Δ P HIGH/LOW alarm?

The CRO is required to acknowledge the alarm and

- A. inform the CRS.
- B. refer to the ARP and enter the TS LCO.
- C. confirm the alarm clears and Rx Building pressure is maintained.
- D. contact an EO to determine correct operation of Rx Bld Ventilation.

ANSWER: C

QUESTION TYPE: SRO

KA # & KA VALUE: 2.4.10 3.0/3.1 10CFR55.41, 43

REFERENCE: PPM 1.3.1 rev 46, pages 31 and 32, step 4.10.5, Operations Expectations and Standards OI-9 rev P, pages 18 and 19, PPM 4.812.R1.7-3 rev 9 page 29

SOURCE: **98 Exam – Modified** - SRO T3, #15

LO: 7845

RATING: L2 L3

ATTACHMENT: NONE

JUSTIFICATION: All distracters are incorrect since PPM 1.3.1 states that for “nuisance alarms”, the ARP need not be referenced and the CRS is required to be informed of “nonnuisance” alarms. Also, repeated investigation of a known condition is not required.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 9

EXAM KEY

10/23/2000

EX00009

WNP-2 has been operating at power with several suspected leaking fuel elements. Offgas activity has been steadily increasing. A leak in the supply line to OG-RIS-612 Offgas Pre-Treatment Monitor requires isolation. The operator closing the valve is expected to receive 3.4 rem TEDE.

Which ONE of the following describes who has the final review and approval of this Planned Special Exposure?

- A. The Plant General Manager.
- B. The Operations Manager.
- C. The Shift Manager.
- D. The Radiation Protection Manager.

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 272000 2.3.2 2.5/2.9 10CFR55.41, 43

REFERENCE: GEN-RPP-08, rev 1 page 7

SOURCE: **98 Exam ex98093 - Modified -** SRO T2, GP2, #10

LO: 6027

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: A is correct. Planned Special Exposures require the signature of PGM. The distracters are lists of incorrect titles.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 10

EXAM KEY

10/23/2000

EX00010

WNP-2 is operating at rated power. The following conditions exist:

DG-1 is tagged out for maintenance.

RHR-P-2B is operating in Suppression Pool Cooling.

A storm causes the loss of the Benton Sub Station (TR-B), the loss of the ASHE Substation (TR-S), and a reactor scram. When DG-2 closes onto the bus, it trips on overcurrent.

Immediately following these events, which ONE of the following is correct?

Enter.....

- A. PPM 5.1.2 RPV Control ATWS, PPM 5.3.1 Secondary Containment Control, and PPM 5.2.1 Primary Containment Control.
- B. PPM 5.1.1 RPV Control, PPM 5.6.1 Station Blackout, and PPM 5.1.3 Emergency Depressurization.
- C. PPM 5.1.2 RPV Control ATWS, PPM 5.3.1 Secondary Containment Control, and PPM 5.1.5 Emergency Depressurization ATWS
- D. PPM 5.1.1 RPV Control, PPM 5.6.1 Station Blackout, and PPM 5.3.1 Secondary Containment Control

ANSWER: D

QUESTION TYPE: SRO

KA # & KA VALUE: 295003 2.4.29 2.6/4.0 10CFR55.43

REFERENCE: PPM 5.6.1 Station Blackout, rev 8, page 4

SOURCE: NEW QUESTION – T1, G1, #1 WNP-2 IPE

LO: 8017

RATING: H2

ATTACHMENT: None

JUSTIFICATION: There is no indication of an ATWS given so A and C are incorrect. B is incorrect because at this point there is no reason to ED, but the loss of power would cause a high pressure entry into Secondary Containment Control. D is correct for the immediate indications.

WNP-2 WRITTEN EXAMINATION

QUESTION # 11

EXAM KEY

10/23/2000

EX00011

Which ONE of the following describes the reactivity effect the End of Cycle Recirc Pump Trip (EOC RPT) is designed to minimize?

- A. Control rod insertion may not initially add enough negative reactivity to overcome the positive reactivity added by the pressure increase from a turbine trip.
- B. Control rod insertion initially adds positive reactivity late core life that must be compensated for by the trip of both recirc pumps.
- C. Recirc Pumps must be tripped to reduce the positive reactivity addition from the turbine trip and prevent exceeding MAPRAT.
- D. Recirc Pumps must be tripped late in core life to minimize the effect of all control rods withdrawn to the full out position and prevent exceeding the LHGR

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 295007AA2.02 4.1/4.1 10CFR55.41, 43

REFERENCE: TS Bases B3.3.4.1 EOC-RPT Instrumentation

SOURCE: **NEW QUESTION** – SRO T1, GP1, #5

LO: 6925

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: TS Bases states the EOC-RPT trip is designed to overcome the lack of negative reactivity in the first few feet of control rod insertion on a scram. This lack of negative reactivity is caused by EOC flux shape. The recirc pumps are tripped to supplement the control rod negative reactivity on a turbine trip. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 12

EXAM KEY

10/23/2000

EX00012

The plant was operating at 100% power when a fire caused the abandonment of the Control Room. CRO1, at the Remote Shutdown Panel is attempting to contact the CRS at the Alternate Remote Shutdown Panel.

Which ONE of the following describes the permanently installed communication systems available at both of these panels for this use?

- A. Plant page and plant radio
- B. Plant page and plant phones
- C. Sound powered phones and plant radio
- D. Sound powered phones and plant phones

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295016AK2.02 4.0/4.1 10CFR55.41

REFERENCE: 82-RSY-1600-T3 page 2

SOURCE: **BANK #4232**– Direct – SR0 T1, GP1, #11 RO T1, GP2, #8

LO: 7739

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: Sound powered phones and Plant phones are the only systems available at both the RSD Panel and ARSD Panel. D is the correct answer. The other 3 are all incorrect because one or both are not available in either the RSD or the ARSD Panels.

COMMENTS: This question has been slightly modified. It is still counted as direct from the bank.

WNP-2 WRITTEN EXAMINATION

QUESTION # 13

EXAM KEY

10/23/2000

EX00013

The plant is in MODE 5 with fuel movement underway. The following conditions exist:

1. A FUEL POOL LEVEL HIGH/LOW annunciator is received.
2. The SRO on the Refuel Bridge reports fuel pool level decreasing visibly.

Which ONE of the following is correct concerning the fuel bundle for these conditions?

- A. The fuel bundle may be placed in any safe location and the SM/CRS must be notified of the actual location.
- B. The fuel bundle should be placed in the nearest storage location and the actual location must be logged in the Radwaste Control Room log.
- C. The fuel bundle should be placed in the nearest storage location and the actual location must be logged in the Control Room log.
- D. The fuel bundle may be placed in any safe location and the Refuel Floor Coordinator must be notified of the actual location.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295023AA1.03 3.3/3.6 10CFR55.41

REFERENCE: ABN-FPC step 4.2.4, rev 0, ABN-FPC-BASES rev 0 pages 1, 11, and 12

SOURCE: **NEW QUESTION** – SRO T1, GP1, #11 RO T1, GP3, #1

LO: 6859

RATING: H3

ATTACHMENT: YES - ABN-FPC

JUSTIFICATION: The procedure gives direction to place any irradiated fuel bundle, in transit, in the closest storage position when reactor cavity water level is decreasing. The direction is then given to log the actual position in either the control room log or the refueling log. C is the correct answer. A, B, and D are not directed by this procedure.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 14

EXAM KEY

10/23/2000

EX00014

The reactor was operating at 100% power when a transient occurred causing wetwell temperature to increase. An Emergency Depressurization was completed prior to exceeding the HCTL.

Which ONE of the following is the **basis** for this Emergency Depressurization?

- A. PCPL will not be exceeded.
- B. PSP will not be exceeded.
- C. The wetwell/drywell interface will not be breached.
- D. The SRV tailpipes will not fail.

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 295026EA2.03 3.9/4.0 10CFR55.41, 43

REFERENCE: PPM 5.0.10 rev 6, page 249

SOURCE: **BANK QUESTION #6138** – Modified – SRO T1, G1, #16

LO: 8303

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: The Heat Capacity Temperature Limit is defined to be the highest wetwell temperature that an Emergency Depressurization will cause the PCPL to be exceeded. Initiation of the ED prior to exceeding the HCTL ensures the PCPL is not exceeded. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 15

EXAM KEY

10/23/2000

EX00015

The plant was operating at 98% power when a LOCA occurred. The following conditions now exist:

Reactor Pressure	82 lbs. down slow
Reactor Level	-198 inches up slow
HPCS-P-1	injecting with a flow rate of 5500 gpm
LPCS-P-1	injecting with a flow rate of 2500 gpm

Which ONE of the following is correct for these conditions?

Adequate core cooling is being maintained by.....

- A. Steam Cooling without injection
- B. Core Submergence
- C. Steam Cooling with injection
- D. Spray Cooling

ANSWER: D

QUESTION TYPE: SRO

KA # & KA VALUE: 295031EA2.04 4.6/4.8 10CFR55.41, 43

REFERENCE: PPM 5.0.10 rev6, page 21

SOURCE: **NEW QUESTION** – SRO T1, GP1, #20

LO: 5974

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: Adequate Core Cooling is being maintained by Spray Cooling. PPM 5.0.10 gives the definition for Spray Cooling as a combined flow from HPCS and LPCS of at least 6000 gpm and reactor level greater than -210 inches. D is correct. The definitions for A, B, and C do not match the conditions given.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 16

EXAM KEY

10/23/2000

EX00016

The plant was operating at 98% power when an ATWS occurred. All rods are not full in. Reactor level has decreased and cannot be maintained GT –192 inches and an Emergency Depressurization has been completed.

Which ONE of the following the **basis** for this Emergency Depressurization?

- A. The Emergency Depressurization maintains peak clad temperature LT 1800°F that ensures no fuel clad perforations.
- B. The Emergency Depressurization maximizes flow from high pressure systems and allows low pressure systems to inject into the core.
- C. Reactor level has reached the Minimum Zero Injection RPV Water Level, MZIRWL, at –192 inches and must be depressurized.
- D. The reactor must be depressurized prior to exceeding the Minimum Steam Cooling Water Level, MSCRWL, at –205 inches.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295031EK3.05 4.2/4.3 10CFR55.41

REFERENCE: PPM 5.0.10 rev 6, page165

SOURCE: **BANK QUESTION #628** – Modified SRO T1, GP1, #19 RO T1, GP1, #9

LO: 8197

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the ED for low pressure injection only assures a 95% probability on no clad perforations at 1500°F not 1800°F. C and D are both incorrect because the levels given for the limits are incorrect. B is the correct answer as stated in PPM 5.0.10.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 17

EXAM KEY

10/23/2000

EX00017

Reactor power has been reduced to allow control rod scram testing. The following conditions exist:

RRC Loop A Flow	37,500 gpm
RRC Loop B Flow	37,500 gpm
Control Rod 30-31	Scrammed to position 00.

RRC-P-1A then trips resulting in reactor power of 40%.

Which ONE of the following is correct action for these conditions?

- A. Increase recirc flow on the running recirc pump, RRC-P-1B
- B. Insert control rods in reverse order on the pull sheet as directed by the SNE
- C. Restart RRC-P-1A when the cause of the trip is determined.
- D. Insert control rods per the fast shutdown sequence when directed by the CRS

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295001AA1.03 2.6/2.7 10CFR55.41

REFERENCE: Single Loop Power/Flow Map, PPM 4.12.4.7 rev 19, page 1-4, and PPM 2.2.1 rev 36, section 5.4

SOURCE: **NEW QUESTION** – SRO T1, GP2, #1 RO T1, GP1, #1

LO: 9700-2, 6719

RATING: H4

ATTACHMENT: YES - Single Loop Power/Flow Map, PPM 4.12.4.7 rev 19, page 1-4, and PPM 2.2.1 rev 36, section 5.4

JUSTIFICATION: A loss of RRC-P-1A drives the plant into the Area of Increased awareness. This would be an unanalyzed rod pattern for entry into the AIA and would require exit by driving rods by the fast shutdown sequence or flowing out. Since only one RRC pump is running, the action would have to be inserting control rods. D is correct. It is never allowed to start an idle recirc pump to exit the AIA.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 18

EXAM KEY

10/23/2000

EX00018

The Plant is operating at 71% power with CW-P-1A out of service. CW-P-1C fails catastrophically causing a simultaneous trip of CW-P-1B.

Which ONE of the following describes the basis for the automatic scram caused by this failure?

A reactor scram is initiated ...

- A. on high reactor pressure to prevent exceeding fuel thermal limits caused by the power increase due to void collapse.
- B. on low reactor water level to prevent fuel damage from lack of adequate core cooling.
- C. on turbine throttle valve closure in anticipation of the reactor transients that would be caused by the closure of these valves.
- D. on high neutron flux to prevent fuel damage from excessively high reactor coolant system pressure.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295002AK3.01 3.7/3.8 10CFR55.41

REFERENCE: TS Bases B3.3.1.1 rev 17, page B 3.3.1.1-16

SOURCE: **NEW QUESTION** – SRO T1, GP2, #3 RO T1, GP2, #2

LO: 5621 5949

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: The referenced TS Bases state the TTV Closure Trip is in anticipation of any reactor transients caused by the closure of the TTVs. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 19

EXAM KEY

10/23/2000

EX0019

The plant was operating at 99% power when a LOCA Signal was received. After verifying auto actions, the CRO notes neither LPCS-P-1 nor RHR-P-2A auto started and have no breaker indication on P601. Neither pump will start manually with the control switch on P601.

Which ONE of the following is the correct explanation for these conditions?

A loss of....

- A. both B1-1 and C1-1 prior to the LOCA signal
- B. both B1-1 and C1-1 after the LOCA signal
- C. both B1-2 and C1-2 after the LOCA signal
- D. both B1-2 and C1-2 prior to the LOCA signal

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 295004AA2.02 3.5/3.9 10CFR55.41, 43

REFERENCE: PPM 4.7.8.1A rev 0, page 6

SOURCE: **NEW QUESTION** – SRO T1, GP2, #4

LO: 5262

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A loss of Div 1 DC prior to a LOCA signal causes a loss of indication on P601 and a failure of the LPCS pump to start with either the control switch or from a LOCA signal. A is correct. D is incorrect because it references Div 2 DC power.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 20

EXAM KEY

10/23/2000

EX00020

The plant is operating at rated conditions when one of the 500 kv transformers shorts to ground across a dirty insulator. The ground causes the 500 kv breakers to open, the Unit Lockout relays to trip, and a momentary undervoltage signal to SM-7 and SM-8.

Which ONE of the following describes the expected response to this event?

- A.
 - turbine trips on anti-motoring
 - N bkrs trip and S bkrs close
 - recirc pumps runback to 15 hz
 - DG1 & 2start and supply their buses
- B.
 - turbine trips on anti-motoring
 - N bkrs trip and S bkrs close
 - recirc pumps trip off
 - DG1 & 2start and supply their buses
- C.
 - turbine trips immediately
 - N bkrs trip and S bkrs close
 - recirc pumps runback to 15 hz
 - DG1 & 2start but do **not** supply their buses
- D.
 - turbine trips immediately
 - N bkrs trip and S bkrs close
 - recirc pumps trip off
 - DG1 & 2start but do **not** supply their buses

ANSWER: D

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 295005AK2.08 3.2/3.3 10CFR55.41

REFERENCE: PPM 4.800.C1 rev 10, page 13, PPM 4.800.C4 rev 9 page 7, and PPM 4.5.7.1 rev 8 page 4

SOURCE: **BANK QUESTION #527 – SRO T1, GP2, #6 RO T1, GP1, #1**
WNP-2 LER 90-031

LO: 5050, 5052

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: The turbine trips immediately from the LO relays, the N bkrs trip and the S bkrs close, the recirc pumps trip off from the RPT trip, and DG-1 and DG-2 auto start from the momentary UV but do not close onto the bus. D is correct.

WNP-2 WRITTEN EXAMINATION

QUESTION # 21

EXAM KEY

10/23/2000

EX00021

A TIP probe has been withdrawn beyond the shield chamber. ARM-RIS-7 TIP Drive area indicates 900 mr/hr.

Which ONE of the following is the correct action to take with these conditions?

- A. Perform an immediate evacuation of the **entire** Reactor Building.
- B. Notify Health Physics and enter PPM 5.3.1 Secondary Containment Control.
- C. Using Emergency Exposure Guidelines, direct maintenance to crank the TIP probe back into the shield chamber.
- D. Direct maintenance to install temporary lead shielding blankets to aid in minimizing the effect of the radiation hazard.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 295033EA2.01 3.8/3.9 10CFR55.41, 43

REFERENCE: PPM 4.602.A5 rev 12, page 23, PPM 4.12.2.2 rev 9 page 2

SOURCE: **BANK QUESTION #LR00078 – SRO T1, GP2, #14**

LO: 7799

RATING: H2

ATTACHMENT: YES - PPM 4.602.A5 rev 12 page 23 and PPM 4.12.2.2 rev 9

JUSTIFICATION: Direction is given in the procedure to notify HP and to refer to PPM 5.3.1. The expectation is that entry conditions into the EOPs are to be known from memory. B is correct. Performing an evacuation of the entire Reactor Bld. is not directed by the referenced procedure. The direction of maintenance into the area is also not directed by the procedure.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 22

EXAM KEY

10/23/2000

EX00022

The plant is operating at 88% power, when the following auto actions take place:

SGT started
CSP/CEP isolated
CN makeups isolated
CR and TSC Emerg Filtration starts and aligns to remote air intakes
RB Emerg Room Coolers start
RB Lighting quenches
RB EDR and FDR discharge headers isolate

The plant remains operating at power following the initiations.

Which ONE of the following is correct concerning these initiations?

These initiations were caused by.....

- A. 1.73 psig Drywell Pressure
- B. - 52 inches Reactor Water Level
- C. 15 mr/hr Reactor Building Exhaust Plenum
- D. + 1.9 inches H2O Reactor Building Pressure

ANSWER: C

QUESTION TYPE: SRO

KA # & KA VALUE: 295034EA2.01 3.9/3.9 10CFR55.41, 43

REFERENCE: 82-RSY-0900-T2 pages 6, 12, and 13, PPM 4.12.4.6A rev 0, pages 3 + 4

SOURCE: **98 EXAM ex98029-** Modified SRO T1, G2, #3

LO: 6914

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: A and B are incorrect because they would have scrammed the reactor along with starting the listed equipment. D is incorrect because High reactor building pressure is not a signal that starts the listed equipment.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 23

EXAM KEY

10/23/2000

EX00023

The plant has experienced a transient that caused hydrogen and oxygen production in excess of the combustible limits. The CRS has directed that CAC be stopped.

Which ONE of the following describes a reason for stopping CAC under these conditions?

Stopping CAC eliminates a possible ignition source for a deflagration and prevents ...

- A. failure of the Wetwell to Drywell interface.
- B. exceeding the Primary Containment Pressure Limit.
- C. failure of the Reactor Building to Wetwell Vacuum Breakers
- D. exceeding the Pressure Suppression Pressure

ANSWER: A

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 500000EK1.01 3.3/3.9 10CFR55.41

REFERENCE: PPM 5.0.10 rev6, pages 268-270 and 277

SOURCE: **NEW QUESTION** – SRO T1, GP1, #25 RO T1, GP1, #12

LO: 8426

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: The basis for securing CAC when combustible limits of H2 and O2 are exceeded is given by PPM 5.0.10 as preventing a failure of the wetwell to drywell interface. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 24

EXAM KEY

10/23/2000

EX00024

The plant is operating at 99% power with BKR B-7 tagged out for maintenance, when a LOCA occurs. All plant equipment responds as expected except BKR S-1, which trips due to an overcurrent 2 minutes after the LOCA signal is received.

Which ONE of the following is true concerning these conditions?

- A. LPCS-P-1 restarts 10 seconds after SM-7 is repowered from DG-1.
- B. LPCS-P-1 restarts 22 seconds after SM-7 is repowered from DG-1.
- C. RHR-P-2A restarts 5 seconds after SM-7 is repowered from DG-1.
- D. RHR-P-2A restarts 18.5 seconds after SM-7 is repowered from DG-1.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 203000K2.01 3.5/3.5 10CFR55.41

REFERENCE: 82-RSY-1300-T5 page 43

SOURCE: **NEW QUESTION** – SRO T2, GP1, #1 RO T2, GP1, #2

LO: 5057

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: With a loss of offsite power, RHR-P-2A would start 5 seconds following repower from DG-1. LPCS would start immediately upon repower. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 25

EXAM KEY

10/23/2000

EX00025

The reactor is operating at 99% power. The CRO notices that the GP1 Scram Group Solenoid indicating light for RPS A is out. The CRO verifies the light bulb is good. Shortly thereafter, an APRM F INOP occurs.

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

- A. The Scram Pilot Valves, CRD-V-117 and 118, energize and open the Inlet and Outlet Scram Valves, CRD-V-126 and 127 for RPS Group 1 control rods.
- B. The Scram Pilot Valves, CRD-V-117 and 118, de-energize and open the Inlet and Outlet Scram Valves, CRD-V-126 and 127 for RPS Group 1 control rods.
- C. Only the Scram Pilot Valves, CRD-V-117 open, they close when the blown fuse in RPS A is replaced.
- D. Only the Scram Pilot Valves, CRD-V-118 open, they close when the ½ scram for RPS is reset.

ANSWER: B

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 212000K3.06 4.0/4.1 10CFR55.41

REFERENCE: EWD 15E024, 807E178TC sht 7 and 9, LO000142 pages 11 and 12

SOURCE: **BANK QUESTION 6268** – Modified - SRO T2, GP1, #5 RO T2, GP1, #10

LO: 6834

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: The Scram Pilot valves are normally energized. With the blown fuse, which causes these indications, the 117 valves for RPS Group 1 valves open. When APRM F goes inop, the 118 valves for all 185 control rods de-energize and open. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 26

EXAM KEY

10/23/2000

EX00026

A control rod withdrawal for startup is underway. SRM count rate is 1E3 cps following withdrawal of the previous rod. During withdrawal of the next control rod, the 1st in the next RWM group, The SRM PERIOD FAST annunciator is received. Reactor period decreased to 40 seconds and is now increasing.

Which ONE of the following is the correct action in this situation?

- A. Stop control rod withdrawal.
- B. Monitor SRMs and maintain countrate <1E4 cps.
- C. Insert control rods until the reactor is subcritical.
- D. Immediately scram the reactor.

ANSWER: A

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 215004A4.01 3.9/3.8 10CFR55.41

REFERENCE: PPM 4.603.A7.5-6 rev 23 page 49

SOURCE: **BANK QUESTION #5027** – Modified SRO T2, GP1, #6 RO T2, GP1, #11

LO: 9530

RATING: H2

ATTACHMENT: YES - PPM 4.603.A7.5-6 rev 23 page 49

JUSTIFICATION: The annunciator response procedure gives specific direction to stop rod motion for a >25 second and <60 second period. A is the correct answer.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 27

EXAM KEY

10/23/2000

EX00027

The plant is returning to operation following a refueling outage. Testing is underway on the Div 2 APRMs prior to going to MODE 1. The following plant conditions exist:

Reactor Pressure -	925 lbs.
Reactor Power -	8%
Mode Switch -	STARTUP/HOT STANDBY
APRM B -	Does not trip when mode switch is taken out of operate and it is bypassed at P603

When the mode switch for APRM D is taken out of operate, APRM D does not trip.

Which ONE of the following describes the required actions:

- A. Place channel in one trip system in trip in 6 hours or place one trip system in trip in 6 hours.
- B. Place the channel in trip in 12 hours or place the associated trip system in trip in 12 hours.
- C. Be in MODE 3 in 12 hours.
- D. Restore RPS trip capability in 1 hour.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 215005 2.1.32 3.4/3.8 10CFR55.41, 43

REFERENCE: TS 3.3.1.1 and bases

SOURCE: **NEW QUESTION** – SRO T2, GP1, #7

LO: 9569

RATING: H3

ATTACHMENT: YES - TS 3.3.1.1, table 3.3.1.1-1, and 3.3.1.1 Bases

JUSTIFICATION: Two channels for the APRM inop trip are required in MODE 2. With less than the required channels operable, the channel has to be tripped or the trip system has to be tripped in 12 hours. B is correct.

WNP-2 WRITTEN EXAMINATION

QUESTION # 28

EXAM KEY

10/23/2000

EX00028

The plant is operating at rated conditions with DP-S1-2A de-energized. The suction line for RRC-P-1A suddenly and completely shears. RHR-P-2C suffers a sheared shaft upon start.

Which one of the following is correct for these conditions?

ADS....

- A. does not automatically initiate but can be initiated with the Arm and Depress Switch.
- B. automatically initiates 105 seconds following the start of RHR-P-2B
- C. will neither automatically initiate nor manually initiate with the Arm and Depress Switch.
- D. automatically initiates 105 seconds following the LOCA signal.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 218000K2.01 3.1/3.3 10CFR55.41

REFERENCE: 82-RSY-1100-T3 page 2 and 6, PPM 4.601.A2 rev 13, page 13

SOURCE: **NEW QUESTION** – SRO T2, GP1, #9 RO T2, GP1, #15

LO: 5071

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: The power supply for Div 2 ADS is DP-S1-2A. With the loss of the power supply to the logic, ADS Div2 does not initiate on the LOCA. When the 105 Second timer times out on Div 1, all 7 ADS valves open. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 29

EXAM KEY

10/23/2000

EX00029

The plant is operating at 100% power when a fault occurs. The CRO notices RWCU-V-1 and RWCU-V-4 are closed following the fault.

Which ONE of the following explains the status of RWCU?

Loss of ...

- A. IN-1
- B. IN-3
- C. RPS-B
- D. RPS-A

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 223002K6.08 3.5/3.7 10CFR55.41

REFERENCE: 82-RSY-0900-T2 page 10

SOURCE: **BANK QUESTION** – SRO T2, GP1, #13 RO T2, GP1, #20

LO: 5604

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: The loss of RPS-B causes both an inboard and an outboard (not MSIVs) isolation. RPS-A causes only an outboard isolation. The loss of IN-1 or IN-2 would not close either RWCU-V-1 or RWCU-V-4. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 30

EXAM KEY

10/23/2000

EX00030

The plant is operating at rated conditions with the lead Fan SGT-FN-1B-2 discharge SGT-V-5B-2, Exhaust to Stack, tagged closed for maintenance. A scram occurs from a loss of feedwater.

Assuming no operator action, which ONE of the following is correct concerning these conditions?

- A. SGT-FN-1B-2 auto starts and trips on low flow. SGT-FN-1B1 auto starts 10 seconds later and aligns to the stack.
- B. SGT-FN-1B-2 auto starts and runs with low and must be manually tripped.
- C. SGT-FN-1B1 auto starts and aligns to the stack immediately following the start signal.
- D. SGT-FN-1B1 auto starts and trips on low flow. SGT-FN-1B2 auto starts 10 seconds later and aligns to the stack.

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 261000A3.02 3.2/3.1 10CFR55.41

REFERENCE: 82-RSY-0400-T3 page 16 and 17

SOURCE: **BANK QUESTION #474** – Modified SRO T2, GP1, #19 RO T2, GP1, #27

LO: 5828

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: With SGT-V-5B-2 closed, the lead fan SGT-FN-1B2 auto starts but has no flow because the discharge valve is close. After 30 seconds, the lead fan trips and the lag fan starts. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 31

EXAM KEY

10/23/2000

EX00031

The plant was operating at 99% power when a transient occurred causing a reactor scram. Following the transient, the operator notes Breakers 7-75/1 and 8-85/1 indicate open on Bd. C.

Which one of the following explains these indications?

- A. Loss of offsite power/LOCA.
- B. Main Turbine trip.
- C. LOCA.
- D. Loss of offsite power.

ANSWER: A

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 262001K6.02 3.6/3.9 10CFR55.41

REFERENCE: 82-RSY-1000-T5 pages 22, 23, and 24

SOURCE: **BANK QUESTION #3473** – Modified – SRO T2, GP1, #21 RO T2, GP2, #16
WNP-2 IPE

LO: 5969

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: For a LOOP, LOCA, or a Main Turbine Trip individually, these breakers do not open. However, the combination of a LOCA and LOOP cause breakers 7-75/1 and 8-85/1 to open. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 32

EXAM KEY

10/23/2000

EX032

The plant was operating at 92% power when a transient occurred causing a scram. Following the scram, the reactor was stabilized with reactor level being controlled +13 inches to +54 inches by operator action. The CRO notes both Recirc Pumps have tripped off with only CB-RPT-3A and CB-RPT-3B open.

Which ONE of the following describes the cause of the scram?

- A. Main Turbine trip.
- B. Loss of feedwater.
- C. High Drywell Pressure
- D. APRM high flux.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 202001A1.04 3.3/3.3 10CFR55.41

REFERENCE: 82-RSY-1000-T1 pages 16 and 35

SOURCE: **NEW QUESTION** – SRO T2, GP2, #1 RO T2, G2, #2

LO: 5023

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A loss of feedwater causes reactor level to reach –50 inches. This causes the Recirc Pumps to trip. CB-RPT-3A and 3B are the only breakers that open on this trip. Neither reactor hi pressure nor APRM hi flux causes a level 2 RRC trip. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 33

EXAM KEY

10/23/2000

EX00033

The plant was operating at 82% power when the Main Turbine tripped, followed by a sudden pressure relay trip of TR-S. All equipment was operating normally prior to the trip.

Which ONE of the following is correct concerning these conditions?

- A. DG-1 and DG-2 start and close onto SM-7 and SM-8.
- B. TMU-P-1A, 1B, and 1C operate normally after power is restored to SM-7 and SM-8
- C. RFW-P-1A and RFW-P-1B control reactor water level normally following the transient.
- D. CAS-C-1A and CAS-C-1B operate normally after power is restored to SM-7 and SM-8

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 300000K2.01 2.8/2.8 10CFR55.41

REFERENCE: 82-RSY-1400-T4 pages 20 and 22

SOURCE: **BANK QUESTION #4355– MODIFIED** – SRO T2, GP2, #12 RO T2, GP2, #18

LO: 5876

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: CAS-C-1A and 1B are powered from critical power supplies from SM-7 and 8. DG-1 and 2 start but do not close onto the bus. SM-72 and SM-82 trip on undervoltage, tripping all TMU pumps. The trip of TRS causes a loss of all condensate and feedwater. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 34

EXAM KEY

10/23/2000

EX00034

The plant is operating at 92% power with RCC-P-1B tagged out for maintenance. A malfunction occurs causing RWCU-V-4 only, to close and isolate RWCU.

Which ONE of the following is the correct cause of this isolation?

Loss of....

- A. control power to RCC-P-1C
- B. control power to RCC-P-1A
- C. SL-83
- D. SL-81

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 400000K3.01 2.9/3.3 10CFR55.41

REFERENCE: 82-RSY-1300-T1 page18, 82-RSY-1200-T1 page 6

SOURCE: **NEW QUESTION** – SRO T2, GP2, #13 RO T2, GP2, #19

LO: 5712 7668

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A loss of control power to RCC-P-1A causes a closure of RCC-V-6. The loss of RCC to outside the drywell loads causes a temperature increase in RWCU non-regen outlet temp and an isolation of RWCU-V-4 only. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 35

EXAM KEY

10/23/2000

EX00035

The plant is in MODE 5 with irradiated fuel in the vessel. The Shift Manager has to leave the control room for 3 hours.

Concerning Tech Specs, which ONE of the following is correct concerning these conditions?

- A. Any individual with an active RO or SRO license may assume control room command.
- B. Only an individual with an active SRO license may assume control room command.
- C. Only the onshift CRS may assume control room command in the absence of the SM.
- D. Any staff SRO may assume control room command, if at least one licensed RO is in the CR.

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 2.1.4 2.3/3.4 10CFR55.41, 43

REFERENCE: Tech Spec 5.1.2 Amendment #149

SOURCE: **NEW QUESTION - SRO T3, #5**

LO: 6071

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: Per TS in MODE 5 the SM can be relieved by anyone with an active RO/SRO license. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 36

EXAM KEY

10/23/2000

EX00036

The plant is in MODE 2 with the following conditions:

Reactor Pressure	951 lbs.
Reactor Power	15%
Turbine 1 st stage metal temp	176°F

The Shift Manager has given direction to roll the turbine.

Which ONE of the following is the correct roll rate for the main turbine under these conditions?

- A. 36 rpm/min
- B. 45 rpm/min
- C. 60 rpm/min
- D. 90 rpm/min

ANSWER: C

QUESTION TYPE: SRO

KA # & KA VALUE: 2.1.25 2.8/3.1 10CFR55.41, 43

REFERENCE: PPM 2.5.7 rev 35 page 115

SOURCE: **NEW QUESTION** – SRO T3, #2

LO: 6518

RATING: H2

ATTACHMENT: YES - PPM 2.5.7 rev 35 page 115

JUSTIFICATION: The correct roll rate is determined by plotting up from 176°F to the roll line and across to the time line of 30 min. Dividing 1800 rpm by 30 gives the correct roll rate of 60 rpm/minute. The distracters are roll rates based on 20, 40, and 50 minute roll times and are incorrect.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 37

EXAM KEY

10/23/2000

EX00037

The plant was operating at 99% power when a transient occurred causing fuel damage. MSLC has been initiated twice and the 50 minute timer has timed out the second time. Main Steam Line Pressure downstream of the Outboard MSIVs is 9 psig.

Which ONE of the following explains these conditions?

- A. System operation is normal as long as pressure is less than 10 psig.
- B. MSLC-FN-1 has failed to start.
- C. There is damage to the MSIVs causing leakage past the valves.
- D. MS-V-67A-D have failed open.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 2.1.32 3.4/3.8 10CFR55.41, 43

REFERENCE: PPM 2.2.6 rev 28, page 15

SOURCE: **NEW QUESTION** – SRO T3, #3 RO T3, #1

LO: 8682

RATING: L2

ATTACHMENT: YES - PPM 2.2.6 rev 27, pages 12 thru 15

JUSTIFICATION: Studies indicate it may take as long as 70 minutes to bleed off pressure downstream of the MSIVs. Pressure remaining high longer than this indicates damage and leakage through the MSIVs. C is correct. B and D are both incorrect because they both vent the area between the inboard and outboard MSIVs.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 38

EXAM KEY

10/23/2000

EX00038

The plant is in MODE 1 at rated conditions, with shift turnover in progress. The oncoming Shift Manager has been notified of the absence of the oncoming Mechanical Maintenance person due to illness.

Based on these conditions, which ONE of the following is correct?

- A. The Maintenance person must be replaced within 2 hours of the start of the shift.
- B. One equipment Operator can be designated an emergency maintenance person and the shift can assume the watch.
- C. The Maintenance person from the previous shift cannot leave the plant until another Maintenance Person relieves him.
- D. One Health Physics person can be designated an emergency maintenance person and the shift can assume the watch.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 2.1.5 2.3/3.4 10CFR55.41, 43

REFERENCE: PPM 1.3.1 rev 46, page 41

SOURCE: **NEW QUESTION** – SRO T3, #1

LO: 6071

RATING: H3

ATTACHMENT: YES - PPM 1.3.1 rev 46, page 41

JUSTIFICATION: Per PPM 1.3.1, the Mechanical Maintenance person can be replaced by one of the equipment operators on shift emergency maintenance. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 39

EXAM KEY

10/23/2000

EX00039

The plant is in MODE 5 with control rod removal underway. Control rod 30-31 has to be removed from above the core.

Which ONE of the following tools is used for removal of this control rod?

- A. Fuel support tool
- B. Control rod grapple
- C. Control rod guide tube grapple
- D. Control rod latch tool

ANSWER: D

QUESTION TYPE: SRO

KA # & KA VALUE: 2.2.27 2.6/3.5 10CFR55.43

REFERENCE: 82-RSY-1500-T1 page 15

SOURCE: **BANK QUESTION #3982-** Slightly Modified – SRO T3, #6

LO: 7701

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: The tool used to unlatch and remove a control rod from above the core is the control rod latch tool. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 40

EXAM KEY

10/23/2000

EX00040

An annunciator, with multiple inputs, has been in alarm continuously for the past 24 hours due to a failed pressure switch. The decision has been made to bypass the Safety Related pressure switch with a jumper and allow the annunciator to respond to the other monitored inputs.

Which ONE of the following correctly describes the requirements for the above jumper installation?

A TMR...

- A. must be completed and contain a 10CFR50.59 Review to consider all affected circuitry by the jumper installation.
- B. must be written and approved by POC prior to installation of the jumper.
- C. is not needed if the jumper is approved by the Shift Manager and the annunciator is tagged with a Caution Tag.
- D. is not needed because the jumper is being installed on a piece of equipment that is already out of service.

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 2.2.11 2.5/3.4 10CFR55.41, 43

REFERENCE: PPM 1.3.9 rev 26, page 11

SOURCE: **INACTIVE BANK QUESTION #784 – SRO T3, #9**

LO: 8625

RATING: H3

ATTACHMENT: YES – PPM 1.3.9 rev 26, pages 10 thru 13 and form 24431 Screening for Licensing Basis Changes

JUSTIFICATION: Since this annunciator is safety related and has multiple inputs, it requires a TMR and a 50.59 review for all inputs. A is the correct answer.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 41

EXAM KEY

10/23/2000

EX00041

The plant is at 25% power following a maintenance outage for work in the drywell. Primary Containment is being inerted, when the EO reports the Liquid Nitrogen Storage Tank Level is 49 inches and down slow on CN-LIS-1.

Which ONE of the following describes the potential problem with inerting the primary containment under these conditions?

- A. Brittle fracture in the Nitrogen high flow line to the containment.
- B. Sudden pressure increase in the primary containment causing a high drywell pressure trip.
- C. Ambient Vaporizers are no longer affective.
- D. Low pressure in the CIA system causing an isolation of CIA-V-39A and 39B.

ANSWER: D

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 2.3.9 2.5/3.4 10CFR55.43

REFERENCE: PPM 2.3.1 rev 38, page 31

SOURCE: **NEW QUESTION – WNP-2 LER 90-022 – SRO T3, #13 RO T3, #7**

LO: 6474

RATING: H2

ATTACHMENT: YES – PPM 2.3.1 rev 38, pages 29 – 32

JUSTIFICATION: LER 90-022 documents the problem of CIA header isolation and inoperability due to inerting the containment with low levels of nitrogen in the nitrogen storage tank. CIA header pressure drops and causes CIA-V-39A and 39B to isolate. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 42

EXAM KEY

10/23/2000

EX00042

The plant was operating at 99% power when a transient occurred. The following conditions exist:

P603 A7 drop 2.2 RPV PRESS HIGH TRIP	Illuminated
P603 A8 drop 2.2 RPV PRESS HIGH TRIP	Illuminated
P603 A8 drop 3.4 ½ SCRAM SYSTEM B	Illuminated
Reactor Pressure RFW-PI-605	1076 psig
Reactor Power	99%

Which ONE of the following procedures is entered first/takes precedence?

- A. PPM 3.1.1 Reactor Scram
- B. PPM 4.603.A7 window 2-2 RPV PRESS HIGH TRIP
- C. PPM 5.1.1 RPV Control
- D. PPM 5.1.2 RPV Control - ATWS

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 2.4.45 3.3/3.6 10CFR55.43

REFERENCE: PPM 1.3.1 rev 46, page29

SOURCE: **NEW QUESTION** – SRO T3, #17 RO T3, #13

LO: 8044

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: PPM 1.3.1 directs the priority/precedence of the Volume 5 procedures over the Vol. 4 Abnormals. With reactor pressure >1060 PPM 5.1.1 should be entered and the actions directed there taken. Even though this scenario is an ATWS, PPM 5.1.1 is the correct procedure. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 43

EXAM KEY

10/23/2000

EX00043

The reactor was operating at 98% power when a transient occurred. Reactor power is unknown at this point.

Which ONE of the following is correct concerning these conditions?

Positive confirmation that the reactor will remain shutdown under all conditions is obtained....

- A. on the RWM display panel.
- B. by all APRMs indicating < 5%.
- C. by 900 gallons of boron injected.
- D. all bypass valves closed with MSIVs open

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 295015AA2.02 4.1/4.2 10CFR55.41, 43

REFERENCE: PPM 5.0.10 rev 6, page185

SOURCE: **NEW QUESTION** – SRO T1, GP1, #10

LO: 8182

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: Confirmation of the reactor shutdown under all conditions can only be accomplished by confirmation of all rods (except 1) full in. The control room crew cannot evaluate this override by any other method without outside help. B, C, and D are all incorrect. None of them confirm the reactor is shutdown under all conditions. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 44

EXAM KEY

10/23/2000

EX00044

The plant was operating at 99% power when a Main Turbine Trip occurred but the reactor did not scram. Direction in the EOPs is given to manually open SRVs until pressure drops to 945 psig.

Which ONE of the following describes the bases for this direction?

- A. Maintains pressure below the scram setpoint and allows resetting of the scram.
- B. Maximizes the amount of steam condensed in the wetwell.
- C. Maintains reactor water inventory in the containment.
- D. Assures that all possible energy is directed to the main condenser.

ANSWER: D

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 295007AK3.04 4.0/4.1 10CFR55.43

REFERENCE: PPM 5.0.10 rev 6, page 175

SOURCE: **NEW QUESTION** – SRO T1, GP1, #6 RO T1, GP1, #4

LO: 8162

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: PPM 5.0.10 says reducing reactor pressure to 945 psig with SRVs minimizes the addition of energy to the containment. D is correct,

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 45

EXAM KEY

10/23/2000

EX0045

The reactor is in MODE 5 with fuel movement underway. The Drywell is open for maintenance. A fuel bundle has fallen off the Fuel Grapple and has fallen onto the reactor flange. Reactor Building Ventilation has isolated and SGT has auto started.

Which ONE of the following is correct for these conditions?

- A. Attempt to pick up the dropped fuel element and move it to a safe location.
- B. Move all personnel out of line of sight with the reactor cavity and notify Health Physics
- C. Enter PPM 5.3.1 Secondary Containment Control.
- D. Enter PPM 5.4.1 Radioactivity Release Control.

ANSWER: C

QUESTION TYPE: SRO

KA # & KA VALUE: 295023AA2.05 3.2/4.6 10CFR55.41, 43

REFERENCE: PPM 5.3.1 rev 15, Entry Conditions

SOURCE: **NEW QUESTION** – SRO T1, GP1, #13

LO: 8017

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: The isolation of Reactor Building Ventilation and the auto start of SGT are caused by a high rad in the exhaust plenum. This is an entry into PPM 5.3.1 Secondary Containment Control. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 46

EXAM KEY

10/23/2000

EX00046

A reactor startup is underway. The following conditions exist.

All IRMs	indicate approximately 60 on range 8
Reactor pressure	720 psig
RRC-P-1A	Off

RRC-P-1B then trips.

Which ONE of the following is correct for these conditions?

- A. Insert control rods using the fast shutdown sequence until all rods are full in.
- B. Insert control rods in reverse order of the pull sheet until the reactor is subcritical.
- C. A manual scram is required as a conservative action in MODE 2.
- D. A manual scram is required to ensure the reactor is not operated in Region A.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 2.3.11 2.7/3.2 10CFR55.45

REFERENCE: ABN-LOSS-OF-RRC BASES rev 0, page 1

SOURCE: **NEW QUESTION** – SRO T3, #14 RO T3, #8

LO: 6917

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: A manual scram is required in MODE 1 to prevent operation in region A of the Power to Flow Map. In MODE 2 it is a conservative action required by the procedure. C is correct. A and B are both correct because it is not directed to drive rods with a total loss of RRC in MODE 2. D is incorrect because at this power level it is not possible to be in region A of the Power to Flow Map.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 47

EXAM KEY

10/23/2000

EX00047

The plant is being shutdown by control rod insertion following a short run at power. The following conditions exist:

Reactor Pressure	172 psig and going down with DEH
Reactor Power	70 on IRM R 5
Reactor Level	+ 36 inches in automatic

A scram then occurs.

Which ONE of the following could explain the cause of the scram?

- A. Pressure fluctuations from pressure control on the BPVs cause a scram on IRM upscale.
- B. Low reactor pressure results in a loss of Feed Pump discharge pressure and a scram on low reactor level.
- C. Increased voiding in the core causes a power increase and a resulting scram on IRM upscale.
- D. Pressure reduction causes a reactor power decrease and a scram on IRM downscale.

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295014AA2.03 4.0/4.3 10CFR55.41, 43

REFERENCE: WNP-2 LER 86-004

SOURCE: **NEW QUESTION – SRO T1, GP1, #9 RO T1, GP1, #6 - WNP-2 LER 86-004**

LO: 7316

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: WNP-2 LER 86-004 describes a scram during low power conditions such as those above. The cause of the scram was pressure fluctuations due to BPV pressure control. The pressure spikes caused a power increase due to the lack of feedback in the core. Power was below the point of adding heat. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 48

EXAM KEY

10/23/2000

EX00048

The plant is operating at 99% power with the CIRCUIT READY light extinguished for SLC-V-4A on P603. The light bulb has been verified to be good. A transient then occurs requiring the initiation of SLC and both keylock switches have been taken to the operate position.

Which ONE of the following is correct for these conditions?

- A. SLC-P-1B starts with a system flow of approximately 43 gpm.
- B. SLC-P-1B starts with a system flow of approximately 87 gpm.
- C. Both SLC Pumps start with a system flow of approximately 43 gpm.
- D. Both SLC Pumps start with a system flow of approximately 87 gpm.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 211000A1.06 3.8/3.9 10CFR55.41

REFERENCE: 82-RSY-0900-T1 page 5

SOURCE: **NEW QUESTION** – SRO T2, GP1, #6 RO T2, GP1, #9

LO: 5923

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: The SLC discharge piping is crosstied to provide for full flow if one of the squib valves does not fire. A loss of continuity to the squib valves has no effect on the start of the SLC pumps. Both pumps start, and inject with full flow into the vessel. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 49

EXAM KEY

10/23/2000

EX00049

The plant is operating at 10% power. The CRO notes, that all LPRM Detector Bypassed indicating lights are illuminated. The LPRM % Heat Flux meters associated with the selected rod are still indicating.

Which ONE of the following describes the reason for this indication?

- A. These lights indicate the status of the LPRM input the RMCS.
- B. An edge rod is selected on the rod select matrix.
- C. LPRMs are bypassed until 15% reactor power.
- D. An RPIS Data Fault has caused the selected LPRMs to bypass automatically.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 215005A3.01 3.5/3.5 10CFR55.43

REFERENCE: 82-RSY-0400-T2 page 9

SOURCE: **NEW QUESTION** – SRO T2, GP1, #8 RO T2, GP1, #12

LO: 5500

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: An edge rod selected causes the LPRM inputs the RBM to be bypassed. This bypass is indicated by the bypass lights around the 4 rod display. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 50

EXAM KEY

10/23/2000

EX00050

The plant is at 15% power. A containment purge to inert the containment is underway. The containment atmosphere was sampled at 0930 and the purge was started at 1030.

Which ONE of the following is the **latest** the containment can next be sampled and still meet procedural requirements?

- A. 2230
- B. 2200
- C. 2130
- D. 2100

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 223001A1.06 3.1/3.3 10CFR55.41

REFERENCE: PPM 2.3.1 Primary containment Venting, Purging, and Inerting rev 38 page 7

SOURCE: **BANK QUESTION #6177** – Modified – SRO T2, GP1, #11 RO T2, GP1, #18

LO: 6469

RATING: H2

ATTACHMENT: YES - PPM 2.3.1 Primary containment Venting, Purging, and Inerting rev 38 pages 6 and 7, and 27 through 31

JUSTIFICATION: The containment atmosphere must be sampled within 8 hours prior to the purge and when the RB vent monitor is inop, once per 12 hours during the purge. A is the latest the sample can be taken and still meet procedural requirements.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 51

EXAM KEY

10/23/2000

EX00051

The reactor has just scrammed after a long run at 100% power. The CRO reports all control rods are full in except 30-31, which is at position 44.

Which ONE of the following is correct for this condition?

- A. The reactor may **not** be maintained sufficiently subcritical to preclude inadvertent criticality in the shutdown condition.
- B. The reactivity transients associated with postulated accident conditions are **not** controllable within acceptable limits.
- C. The reactor will remain shutdown from all operating conditions and transients, and Design Basis Events.
- D. The reactor will remain shutdown as long as reactor coolant temperature does not decrease to less than 200°F.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295006AK1.02 3.4/3.7 10CFR55.41

REFERENCE: TS Bases B3.1.1 Shutdown Margin, Page B3.1.1-1

SOURCE: **NEW QUESTION** – SRO T1, GP1, #3 RO T1, GP1, #2

LO: 6925

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: TS Bases gives one of the SDM requirements as, the reactor will remain shutdown from all operating conditions and transients, and Design Basis Events. A and B would be correct without the "**not**" in each response. D is incorrect because the reactor will remain shutdown under all conditions with only one rod not full in. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 52

EXAM KEY

10/23/2000

EX00052

The plant experienced a large LOCA and a complete Loss of Offsite Power. The following conditions exist:

Reactor pressure	4 psig
Reactor level	-175 inches and up slow
HPCS-P-1	in operation at 6038 gpm
Drywell hydrogen	3.7%
Drywell oxygen	.77 %
Drywell pressure	1.59 psig
Reactor Building pressure	-.05 in H ₂ O
Reactor Exhaust Plenum	12 mr/hr

Which ONE of the following is correct concerning these conditions?

Enter PPM ...

- A. 5.2.1 and 5.3.1 and start SGT to maintain Reactor Building pressure.
- B. 5.2.1 and 5.3.1 and isolate all systems discharging into Secondary Containment.
- C. 5.1.1 and 5.2.1 and initiate CAC with suction from the drywell.
- D. 5.1.1 and 5.2.1 and secure CAC with a suction from either the wetwell or drywell.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 223001K5.12 2.7/2.8 10CFR55.41

REFERENCE: PPM 5.2.1 rev 13, PPM 5.3.1 rev 13

SOURCE: **NEW QUESTION** – SRO T2, GP1, #10 RO T2, GP1, #17 **WNP-2 IPE**

LO: 8017

RATING: H3

ATTACHMENT: YES – PPM 5.2.1 PC Gas Flowpath, PPM 5.3.1

JUSTIFICATION: With 3.7% H₂ in the drywell and < 1% O₂, direction is given to start CAC with suction on the drywell. A and B are incorrect because there no entry for PPM 5.3.1. D is incorrect CAC is not secured until H₂ = 6% and O₂ = 4.8%. C is correct

WNP-2 WRITTEN EXAMINATION

QUESTION # 53

EXAM KEY

10/23/2000

EX00053

The plant was operating at 99% power when a transient occurred. LPCS is the only ECCS Pump in service and injecting into the core. The CRO reports LPCS-P-1 amps, flow, and discharge pressure are all starting to oscillate and getting worse.

Which ONE of the following describes the cause of these indications?

- A. High drywell pressure
- B. Low reactor water level
- C. High reactor pressure
- D. Low suppression pool level.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295030EK2.03 3.8/3.9 10CFR55.41

REFERENCE: General Physics BWR Gen. Fundamentals Chapter 4: Pumps page11

SOURCE: **NEW QUESTION** – SRO T1, GP1, #18 RO T1, GP2, #15

LO: 7145

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: GP Gen. Fun. Chapter 4 describes the effect of cavitation as an oscillation of discharge pressure. Cavitation is caused by a loss of NPSH. NPSH is the difference between the pressure on the suction side of the pump and the saturation pressure of the liquid being pumped. D is correct. It is the only possibility that lowers the suction pressure of the LPCS pump.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 54

EXAM KEY

10/23/2000

EX00054

The plant is shutdown following an extended run at rated conditions. RHR-P-2B is in operation in shutdown cooling with the head spray line open. The following actions then take place:

RHR-V-8	Closes
RHR-V-9	Remains Open
RHR-V-23	Closes
RHR-V-53B	Closes
RHR-P-2B	Trips

Which ONE of the following is the cause of these indications

- A. Loss of RPS B
- B. Hi drywell pressure
- C. Reactor level –23 inches
- D. Loss of MC-7A

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 223002K3.17 2.8/2.9 10CFR55.41

REFERENCE: 82-RSY-0700-T2 page 17 and 82-RSY-0900-T2 pages 10 and 14

SOURCE: **NEW QUESTION** – SRO T2, GP1, #12 RO T2,GP1, #19

LO: 5604

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: Both A and C cause RHR-V-9 to close also. Hi drywell pressure has no affect on this isolation group. D causes a loss of RPS-A which causes an out board isolation. D is correct.

COMMENTS:

EX00055

WNP-2 WRITTEN EXAMINATION

QUESTION # 55

EXAM KEY

10/23/2000

The plant is operating at rated conditions with RHR-P-2A out of service, due to high vibration, since 0700 on May 18. At 1130 on May 20, the motor for RHR-V-4C fails in the closed position during surveillance.

Which ONE of the following is correct for these conditions?

- A. RHR-P-2A must be returned to service by 0700 on May 25.
- B. RHR-P-2A must be returned to service by 1130 on May 23.
- C. RHR-V-4C must be returned to service by 1130 on May 21
- D. RHR-V-4C must be returned to service by 0700 on May 25

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 226001 2.2.24 2.6/3.8 10CFR55.43

REFERENCE: TS 3.5.1 ECCS Operating pages 3.5.1 and 3.5.2

SOURCE: **NEW QUESTION** – SRO T2, GP1, #14

LO: 9540

RATING: H4

ATTACHMENT: YES - TS 3.5.1 ECCS Operating pages 3.5.1 and 3.5.2

JUSTIFICATION: TS allows for a 72 hour time period when 2 ECCS systems are out of service to restore one system to operable. A and D both exceed the allowable time to restore one system and C is prior to the allowable 72 hour time limit. B is correct

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 56

EXAM KEY

10/23/2000

EX00056

The CRO has been given a surveillance to align RHR to the Standby Lineup. When he attempts to open RHR-V-4A, the valve will not open.

Which ONE of the following is the explanation of this failure to open?

- A. RHR-V-53A Shutdown Cooling Return is open.
- B. RHR-V-6A Shutdown Cooling Suction is open.
- C. RHR-V-8 Shutdown Cooling Isolation is open.
- D. RHR-V-24A Suppression Pool Return is open.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 226001A4.02 3.1/3.1 10CFR55.41

REFERENCE: 82-RSY-1300-T3 page 14

SOURCE: **NEW QUESTION** – SRO T1, GP1, 315 RO T2, GP2, #10

LO: 5781

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: The only valve RHR-V-4A is interlocked with is RHR-V-6A. When RHR-V-6A is not full closed, RHR-V-4A cannot be opened. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 57

EXAM KEY

10/23/2000

EX00057

The reactor is at 80% power with turbine trip testing underway. The operator at the Turbine Front Standard places the red Turbine Trip and Reset Lever to the RESET position. The Shift Support Supervisor informs the control room they can push the Turbine Trip Pushbuttons.

Which ONE of the following is correct for this condition?

- A. When the EO releases the Turbine Trip and Reset Lever following Turbine Trip testing, the Turbine Trips.
- B. When the CRO depresses the Turbine Trip Pushbuttons, the Turbine trips.
- C. All trips are bypassed with the Turbine Trip and Reset Lever in the RESET position.
- D. Only the electrical trips from the Main Control room are bypassed with the Turbine Trip and Reset Lever in the RESET position.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 241000K4.13 2.9/3.0 10CFR55.41

REFERENCE: 82-RSY-0100-T5 page 24 and **WNP-2 LER 95-002**

SOURCE: **NEW QUESTION** – SRO T2, GP1, #17 RO T2, GP1, #23 - **WNP-2 LER 95-002**

LO: 5564

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: During performance of trip testing on Feb. 18, 1995, the EO placed the Trip and reset lever to the reset position and the turbine tripped when the trip pushbuttons were depressed in the control room. The Test Lever in the TEST position blocks all turbine trips and allows testing. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 58

EXAM KEY

10/23/2000

EX00058

The plant is operating at 26% power when a leak develops in the Main Condenser. Off Gas flow is increasing at a rapid rate.

Assuming no operator action, which ONE of the following is correct for this condition?

The plant will scram from...

- A. hi pressure.
- B. low water level.
- C. MSIV isolation.
- D. main turbine trip.

ANSWER: C

QUESTION TYPE: SRO

KA # & KA VALUE: 295002AA2.04 2.8/2.9 10CFR55.41, 43

REFERENCE: PPM 4.6.5.1 rev 10, page 2

SOURCE: **NEW QUESTION** – SRO T1, GP2, #2

LO: 5621 5949

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: The leak causes a loss of main condenser vacuum. As vacuum decreases, the turbine trips but does not scram the reactor with load less than 30 %. At 8.3 inches HG, the MSIVs close and cause a scram as long as the MODE SWITCH is in RUN. C is the correct answer.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 59

EXAM KEY

10/23/2000

EX00059

The plant is in MODE 5 with fuel movement underway on the refuel floor. ARM-RIS-2 Spent Fuel Storage Area, alarms in the control room.

Which ONE of the following describes the local indication for personnel notification?

- A. A rotating amber beacon and an audible klaxon.
- B. A rotating amber beacon only.
- C. A white indicating lamp and an audible klaxon.
- D. A white indicating lamp only.

ANSWER: A

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 295033EK1.02 3.9/4.2 10CFR55.41

REFERENCE: LO000141 pages 6 and 7

SOURCE: **NEW QUESTION** – SRO T1, GP2, #13 RO T1, GP2, #16

LO: 5114

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: All ARMs have a rotating beacon to warn personnel of potential local area radiation. Only the new fuel and the spent fuel area rad monitors also have a klaxon associated with the alarm setpoint. The white indicating light is a downscale indication. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 60

EXAM KEY

10/23/2000

EX00060

The plant was operating at 98% power, with RWCU-P-1A in operation, when a transient occurred. After the plant is stabilized, the CRO notes both RWCU Pumps have tripped off.

Which ONE of the following is the cause of this condition?

- A. Drywell pressure 1.89 psig
- B. RWCU-P-1A motor cavity temperature 102°F.
- C. RWCU system flow 120 gpm.
- D. Reactor level –55 inches.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 204000A3.03 3.6/3.6 10CFR55.41

REFERENCE: 82-RSY-1200-T1 pages 6 and 7

SOURCE: **NEW QUESTION** – SRO T2, GP2, #3 RO T2, GP2, #4

LO: 5035 5037

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: Reactor level of –55 inches causes an RWCU isolation. The isolation causes a pump trip. None of the other 3 selections are either trips or isolations. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 61

EXAM KEY

10/23/2000

EX00061

The reactor is at 61% power with a control rod withdrawal to the 100% rod line underway. The CRO withdrawing rods receives an UPSCALE TRIP and an ALARM SET HI on the Rod Block Monitor while withdrawing a control rod.

Which ONE of the following is correct concerning these conditions.

- A. The rod block clears when the push to set up pushbutton is pushed.
- B. When rod motion stops, the RBM nulls, and the rod block clears.
- C. The rod block clears when the next control rod is selected.
- D. When core average flux equals local flux, the rod block automatically clears.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 215002K5.01 2.6/2.8 10CFR55.41

REFERENCE: 82-RSY-0800-T1 pages 8 and 9

SOURCE: **NEW QUESTION** – SRO T2, GP2, #7 RO T2, GP2, #7

LO: 5694

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the Push to Setup pushbutton does not clear and upscale trip. B is incorrect because the RBM does not null when rod motion stops. D is incorrect because the RBM does not compare local and average flux to clear a rod block. C is correct because the RBM selects new trip levels when a new rod is selected.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 62

EXAM KEY

10/23/2000

EX00062

The reactor is operating at rated conditions.

Which ONE of the following describes how CRDM graphitar seal embrittlement is prevented?

- A. Cooling water from CRDH is supplied to the P-over port at a high enough flow rate to ensure sufficient cooling of the CRD Mechanism.
- B. Cooling water from CRDH is supplied to the outside of the thermal sleeve at a high enough flow rate to ensure sufficient cooling of the CRD Mechanism.
- C. The CRD Mechanism is monitored for temperature by a thermocouple in the instrument tube and maintained less than 250°F.
- D. The CRD Mechanism is monitored for temperature by a thermocouple in the in the base of the stop piston and maintained less than 250°F.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 214000K4.02 2.5/2.5 10CFR55.41

REFERENCE: LO000137 pages 10 and 13

SOURCE: **NEW QUESTION** – SRO T2, GP2, #6 RO T2, GP2, #7

LO: 5217

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: A and B are both incorrect because they describe an incorrect flow path. D is incorrect because the thermocouple is located inside the instrument tube not the base of the stop piston.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 63

EXAM KEY

10/23/2000

FEX00063

The plant has just scrammed from rated conditions. All immediate actions have been completed.

Which ONE of the following is correct for this condition?

- A. CRO-2 must notify the Shift Manager of the scram.
- B. The CRS must notify plant staff of the scram over the PA system.
- C. The STA is required to notify the NRC within 15 minutes of the scram.
- D. The Shift Manager is required to notify the Recovery Manager.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 2.1.14 2.5/3.3 10CFR55.43

REFERENCE: PPM 1.3.1 rev 46, page 35

SOURCE: **NEW QUESTION** – SRO T3, #4

LO: 6086

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: PPM 1.3.1 requires the notification of plant staff by the use of the PA system. There are not requirements for the actions of A, C, or D. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 64

EXAM KEY

10/23/2000

EX00064

The plant is operating at rated conditions when CRO1 notes reactor water level on the Wide Range indicating +18 inches and +36 inches on the Narrow Range.

Which ONE of the following explains these indications?

The level discrepancy results from...

- A. the pressure drawdown effect of the jet pump flow past the Wide Range variable line tap.
- B. an increased level in the downcomer area due to the pressure drop across the steam dryer.
- C. Wide Range calibration conditions of 0 psig, 75°F reactor building temperature and 212°F in the drywell.
- D. Wide Range calibration conditions 1000 psig, 135°F reactor building temperature and 80°F in the reactor building.

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 290002 2.4.48 3.5/3.8 10CFR55.43

REFERENCE: 82-RSY-0100-T2 pages 4, 5, and 13

SOURCE: **NEW QUESTION** – SRO T2, GP3, #4

LO: 5588

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: C and D are both incorrect because the given calibration condition for the Wide Range are incorrect. B is has nothing to do with the difference between the Wide Range and the Narrow Range because they both “see” the level in the downcomer region. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 65

EXAM KEY

10/23/2000

EX00065

The plant was operating at 80% power with Cond-P-2A and Cond-P-2B in service when Cond-P-2A tripped. Assuming no operator actions, which ONE of the following is correct concerning these conditions?

Reactor level is controlled...

- A. in the normal level band at +36 inches with Feedwater and Recirc Pumps at 60 hz.
- B. at +18 inches with Feedwater and Recirc Pumps at 30 hz..
- C. in the normal level band at +36 inches with Condensate Booster Pumps and Recirc Pumps at 15hz.
- D. between –50 inches and +54.5 inches with RCIC and HPCS, and Recirc Pumps off.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 256000K1.13 3.5/3.5 10CFR55.41

REFERENCE: 82-RSY-0500-T4 pages 22, 23, and 24 LO000184 page 24

SOURCE: **NEW QUESTION** – SRO T2, GP3, #3 RO T2, GP2, #14

LO: 5022

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: One Condensate Booster pump will not maintain sufficient Feed Pump suction pressure to prevent a feed pump trip at this power level. With no operator action, level decreases to less than –50 inches and is recovered by RCIC and HPCS. Recirc pumps trip off at –50 inches. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 66

EXAM KEY

10/23/2000

EX00066

The plant is shutdown with the following conditions:

RHR-P-2B	In operation in Suppression Pool Spray
RHR-P-2A	In operation in Shutdown Cooling
Reactor Level	+60 inches

The plant then receives a high drywell pressure signal.

Which ONE of the following is correct for these conditions?

- A. RHR-V-27B Suppression Pool Spray remains open and sprays the wetwell, RHR-V-42B LPCI Injection opens, but does not inject into the core, because of reactor pressure.
- B. RHR-V-27B Suppression Pool Spray, closes, RHR-V-42B LPCI Injection opens, and the pump injects into the core.
- C. RHR-V-42B LPCI Injection opens, RHR-V-27B Suppression Pool Spray closes, but the system does not inject into the core, because of reactor pressure.
- D. RHR-V-42B LPCI Injection opens when RHR-V-27B is manually closed by the operator and then injects into the core..

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 230000A3.01 3.4/3.3 10CFR55.41

REFERENCE: 82-RSY-1300-T3 pages 17, 18, and19

SOURCE: **NEW QUESTION** – SRO T2, GP2, #8 RO T2, GP2, #11

LO: 5781

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: With RHR in shutdown cooling, RHR has enough discharge head to inject, so A and C are incorrect. D is incorrect because RHR-V-27B gets an auto close signal from the high drywell initiation signal. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 67

EXAM KEY

10/23/2000

EX00067

The plant is operating at 96% power when a bomb threat is called into the control room from a phone outside the plant. The caller states the bomb is located on the 522' elevation of the Reactor Building in the East CRD area.

Which ONE of the following describes the immediate actions required in this condition?

- A. Complete the Bomb Threat Call Checklist and notify Security.
- B. Notify Security and Scram the plant.
- C. Scram the plant and evacuate the Protected Area.
- D. Evacuate the Reactor Building and complete the Bomb Threat Call Checklist.

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 290001 2.4.28 2.3/3.3 10CFR55.41, 43

REFERENCE: ABN-SECURITY rev 0, page 1

SOURCE: **NEW QUESTION** – SRO T2, GP2, #22

LO: NO LO

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: The bomb threat procedure requires immediate notification of Security and completion of the Bomb Threat Call Checklist. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 68

EXAM KEY

10/23/2000

EX00068

The plant is operating at rated conditions when SA-PCV-2 isolates.

Assuming all plant equipment operated as designed, which ONE of the following is the cause of this condition.

- A. A leak in the service air line causing service air pressure to drop to 78 psig.
- B. A leak in the control air line causing instrument air pressure to drop to 78 psig.
- C. Trip of SA-C-1.
- D. Trip of CAS-C-1A.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295019AK3.03 3.2/3.2 10CFR55.41

REFERENCE: 82-RSY-1400-T4 pages 16 and 23

SOURCE: **NEW QUESTION – SOER 8801** – SRO T1, GP2, #11 RO T1, GP2, #10

LO: 5878

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: When pressure decreases to <80 psig in the control air header, SA-PCV-2 closes to isolate the potential leak. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 69

EXAM KEY

10/23/2000

EX00069

The plant was operating at 99% power when a loss of feedwater caused a reactor scram. A loss of DC causes a loss of annunciation on P601, P602 and P603.

Which ONE of the following actions is required immediately in addition to the directions given in the EOPs?

- A. Fully open RFW-V-118 to allow reactor level control on RFW-FCV-10A and RFW-FCV-10B.
- B. Notify all outside operators to walk down the reactor building until the loss of annunciation has been corrected.
- C. Stop all ECCS equipment not needed for adequate core cooling to prevent damage from unannounced malfunctions.
- D. Perform an immediate and continuous control board walkdown to assess system operability.

ANSWER: D

QUESTION TYPE: SRO

KA # & KA VALUE: 295004 2.4.8 3.0/3.7 10CFR55.41, 43

REFERENCE: PPM 4.7.8.3 rev 4 page 2

SOURCE: **NEW QUESTION** – SRO T1, GP2, #5

LO: 6845

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: PPM 4.7.8.3 requires a control board walk down with a loss of annunciation. This direction is in addition to but does not supercede the direction given in PPM 5.1.1 RPV Control. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 70

EXAM KEY

10/23/2000

EX00070

The plant was operating at 99% power when a transient occurred. Drywell pressure is now at a point that direction is given to vent the Primary Containment prior to exceeding the Primary Containment Pressure Limit.

Which ONE of the following describes the basis for this direction?

Venting the Primary Containment at this point...

- A. precludes failure of the containment and subsequent loss of systems required to maintain adequate core cooling.
- B. prevents exceeding 1 rem TEDE at the site boundary during the release.
- C. precludes failure of the SRV Tailpipe and subsequent loss of the Pressure Suppression function of the wetwell.
- D. allows for a controlled release through Rx Building Ventilation.

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 295010 2.1.32 3.4/3.8 10CFR55.41, 43

REFERENCE: PPM 5.0.10 rev 6, pages 93 and 94

SOURCE: **NEW QUESTION** – SRO T1, GP1, #7

LO: 8040

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: 5.0.10 defines the PCPL as the limit used to preclude containment failure and subsequent loss of the ability to maintain adequate core cooling. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 71

EXAM KEY

10/23/2000

EX00071

The reactor is operating at 20% power when a DEH malfunction causes a 10 psig pressure increase in the reactor.

Which ONE of the following describes the effect of this pressure increase on the reactor?

- A. Reactor power increases and feedwater level control maintains reactor level at a new slightly higher equilibrium level.
- B. Reactor power decreases and feedwater level control maintains reactor level at a new slightly lower equilibrium level.
- C. Reactor level decreases, feedwater level control returns reactor level to normal at a new slightly higher power level.
- D. Reactor level increases, feedwater level control returns reactor level to normal at a new slightly lower power level.

ANSWER: C

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 295025EK2.11 3.5/3.6 10CFR55.41

REFERENCE: 82-RSY-0610-T4 pages 3 and 4 GP Reactor Theory chap.4 pages 15 and 16

SOURCE: **NEW QUESTION** – SRO T1, GP1, #14 RO T1, GP1, #7

LO: 5395 7271

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A pressure increase causes a reduction in the void content in the core. This results in a decrease in reactor level and an increase in reactor power. Feedwater level control responds to the reduction in reactor level and returns it to normal. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 72

EXAM KEY

10/23/2000

EX00072

The reactor was operating at 98% power when a turbine trip occurred. Not all rods inserted fully due to a hydraulic ATWS. Reactor power is 16%. Direction has been given by the CRS to insert control rods. The CRO notes there is an insert and withdraw rod block indicated on the RMCS.

Which ONE of the following is the cause of these indications?

- A. RBM and RPIS
- B. APRM downscale
- C. APRM inop
- D. RSCS and RWM

ANSWER: D

QUESTION TYPE: SRO/RO

KA # & KA VALUE: 295037EA1.07 3.9/4.0 10CFR55.41

REFERENCE: 82-RSY-0500-T1 page 13

SOURCE: **NEW QUESTION** – SRO T1, GP1, #22 RO T1, GP1, #10

LO: 5795

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the RBM only enforces blocks > 30% power and RPIS does not directly cause a rod block. B is incorrect because APRM downscale is bypassed with the mode switch in S/D. C is incorrect because APRM inop does not cause an insert block. D is correct because both the RWM and the RSCS cause insert and withdraw block with rods out of position during an ATWS.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 73

EXAM KEY

10/23/2000

EX00073

The plant is in MODE 5 with the full core offloaded following an extended run at rated power. The normal cooling water supply to Fuel Pool Cooling Heat Exchangers has been lost.

Which ONE of the following systems can be used as a backup cooling supply?

- A. RCC Reactor Closed Cooling Water
- B. CST Condensate Storage and Transfer
- C. TSW Plant Service Water
- D. SSW Standby Service Water

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295018AA1.01 3.3/3.4 10CFR55.41

REFERENCE: LO000202 page 15

SOURCE: **NEW QUESTION** – SRO T1, GP2, #8 RO T1, GP2, #9

LO: 5371

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: RCC is the primary source of cooling for FPC and not the backup. TSW and CST are not hard piped into the FPC heat exchangers. Standby Service Water is the system hard piped into the FPC heat exchangers for a backup system. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 74

EXAM KEY

10/23/2000

EX00074

The reactor was operating at 99% power when an inadvertent containment isolation caused a scram. Not all rods fully inserted. Reactor power is still 30%.

Which ONE of the following is correct for these conditions?

Boron injection is required prior to the Suppression Pool exceeding 110°F to prevent...

- A. containment pressure from exceeding PSP.
- B. the wetwell from exceeding the HCTL.
- C. local fuel pin power from exceeding MCPR Limits.
- D. fuel bundle power from exceeding LHGR Limits.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295020AK1.02 3.5/3.8 10CFR55.41

REFERENCE: PPM 5.0.10 rev 6, pages 77 and 192

SOURCE: **NEW QUESTION** – SRO T1, GP2, #11 RO T1, GP2, #12

LO: 8086

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: Boron is injected prior to reaching 110°F in the suppression pool to prevent exceeding the HCTL. HCTL prevents failure of the containment or equipment necessary for safe shutdown by assuring that reactor blowdown does not cause containment pressure to exceed PCPL. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 75

EXAM KEY

10/23/2000

EX00075

The plant was operating at 100% power when a large LOCA occurred. The following conditions exist:

Reactor Level	-172 inches and stable
LPCS-P-1	Injecting
RHR-P-2A	Sheared shaft
SW-P-1A	Tripped on overload
HPCS-P-1	Injecting
SM-8	Tripped on overload

The Reactor building Equipment Operator calls the control room with a LPCS Pump Room temperature of 159°F.

Which ONE of the following is correct concerning this condition?

- A. No action is required until room temperature exceeds 180°F.
- B. Declare LPCS-P-1 inoperable within 4 hours.
- C. Restore the area temperature to LT 150°F within 8 hours.
- D. Immediately trip LPCS-P-1 and declare the pump inoperable within 4 hours.

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 209001A2.07 2.6/2.8 10CFR55.41

REFERENCE: LCS 1.7.1 rev 18, page 1.7.1-1 and 1.7.1-3

SOURCE: **NEW QUESTION** – SRO T2, GP1, #3 RO T2, GP1, #4

LO: 9540

RATING: H3

ATTACHMENT: YES - LCS 1.7.1 rev 18, page 1.7.1-1 and 1.7.1-3

JUSTIFICATION: The LCS for area temperature monitoring allows a maximum room temperature of 149°F in the LPCS Pump Room. No action is required per the LCS until room temperature exceeds the allowable temperature plus 30 °F. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 76

EXAM KEY

10/23/2000

EX00076

During a plant startup, the following main turbine generator conditions exist:

The turbine is latched
One generator output breaker is closed
Bypass valves are partially open

Which ONE of the following describes the operating mode of the Digital Electro-Hydraulic (DEH) Control System for these conditions?

- A. Mode 4, Turbine Follow Reactor Manual.
- B. Mode 1, Reactor Start.
- C. Mode 2, Turbine Start.
- D. Mode 3, Turbine Load Control

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 241000K1.06 3.8/3.9 10CFR55.41

REFERENCE: 82-RSY-0400-T5 pages 4 and 5

SOURCE: **BANK QUESTION #568– DIRECT** – SRO T2, GP1, #16 RO T2, GP1 #22

LO: 5268

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: Turbine Load Control, Mode 3 is entered when either generator output breaker is closed and the BPVs are still open. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 77

EXAM KEY

10/23/2000

EX00077

The plant is in MODE 5 with a fuel bundle in transit between the reactor cavity and the spent fuel pool. SRM-A and SRM-C are both out of service with maintenance underway to repair the instrument drawer. An I&C Technician inadvertently moves the Mode Switch for SRM-B out of the operate position.

Concerning Tech Specs, which ONE of the following is correct?

- A. Immediately insert all insertable control rods.
- B. Immediately suspend core alterations.
- C. Within 1 hour place the Mode Switch in the Shutdown position.
- D. Within 1 hour initiate action to fully insert all control rods in cells with fuel assemblies.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 215004 2.2.24 2.6/3.8 10CFR55.43

REFERENCE: Tech Spec 3.3.1.2 and table 3.3.1.2-1 pages 3.3.1.2-1, 2, and 6

SOURCE: **NEW QUESTION** - SRO T2, GP1, #18

LO: 6926

RATING: L3

ATTACHMENT: None

JUSTIFICATION: Tech Specs required immediate suspension of core alterations when the number of SRMs is less than that required for MODE 5. B is correct. The distracters are plausible but incorrect combinations of other actions for inoperable SRMs.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 78

EXAM KEY

10/23/2000

EX00078

The plant was operating at 99% power when an MSIV isolation occurred. The following conditions exist:

Reactor level	-15 inches and up slow
RCIC	in operation for level control
Suppression pool temperature	91°F and up slow
RHR-P-2A	in operation on minimum flow
RHR-P-2B	in operation on minimum flow
RHR-P-2C	Off - Overcurrent lockout
HPCS-P-1	Off - Sheared shaft

A Hi Dywell pressure signal was received 3 minutes ago.

Which ONE of the following are the correct actions for these conditions?

Open ...

- A. RHR-V-27A and 27B(Suppression Pool Spray), RHR-V-24A and 24B(Sup. Pool Test Return) full open. Close RHR-V-48A and 48B.
- B. RHR-V-27A (Suppression Pool Spray), RHR-V-24A (Sup. Pool Test Return) full open. Close RHR-V-48A and 48B. Open RHR-V-42B(LPCI Injection)
- C. RHR-V-24A and 24B(Sup. Pool Test Return) full open. Close RHR-V-48A and 48B when the 10 minute open interlock has cleared.
- D. RHR-V-42A and RHR-V-42B (LPCI Injection Valves) until reactor level is greater than +13inches. Then open RHR-V-27A and 27B(Suppression Pool Spray), RHR-V-24A and 24B(Sup. Pool Test Return) full open. Close RHR-V-48A and 48B.

ANSWER: C

QUESTION TYPE:	RO/SRO
KA # & KA VALUE:	295013AA1.01 3.9/3.9 10CFR55.41
REFERENCE:	PPM 2.4.2 rev 43, pages 41, 42, 44, and 45, PPM 5.2.1 Primary Containment Control
SOURCE:	BANK QUESTION – 98 EXAM EX98074– MODIFIED – SRO T1, GP1, #8 RO T1, GP1, #6
LO:	5774
RATING:	H3
ATTACHMENT:	YES – PPM 5.2.1 Primary Containment Control rev 13, Wetwell Temp. Leg only
JUSTIFICATION:	With RCIC on and adequate core cooling assured by submergence, it is not required to place RHR into injection. With SP temp greater than 90°F, it is required to maximize cooling with both loops. C is correct.
COMMENTS:	

WNP-2 WRITTEN EXAMINATION

QUESTION # 79

EXAM KEY

10/23/2000

EX00079

The plant was operating at 99% power when a transient caused reactor pressure to increase to 1153 psig. Both RRC Pumps have tripped off.

Which ONE of the following describes the basis for this trip?

- A. Tripping the Recirc Pumps increases Core Inlet Subcooling, which reduces reactor power.
- B. The Boiling Boundary in the core moves up the fuel channel when the Recirc Pumps are tripped, which adds negative reactivity.
- C. Recirc Pumps are tripped to overcome the power increase caused by the moderator temperature increase from the increasing reactor pressure.
- D. Additional negative reactivity is added by increased voiding in the core caused by tripping the RRC Pumps.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295025EK3.07 3.3/3.7 10CFR55.41

REFERENCE: 82-RSY-1000-T1 page 31/32

SOURCE: **NEW QUESTION** – SRO T1, GP1, #15 RO T1, GP1, #8

LO: 5022

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: Reactor pressure this high is indicative of an ATWS condition. Negative reactivity must be added quickly. Tripping the RRC pumps causes an immediate voiding in the core and a resulting negative reactivity addition. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 80

EXAM KEY

10/23/2000

EX00080

The plant had been operating at 98% power for an extended period of time when a major transient occurred. The following conditions have existed for the past 18 minutes.

Control Rod 30-31	Stuck at position 46
Wetwell temperature	88°F
TEA-RIS-13– TB Exhaust	5.4E5 cpm
Reactor level	-199 inches
Reactor building pressure	-0.11 inches H ₂ O

Which ONE of the following is correct for these conditions?

Enter...

- A. PPM 5.1.1RPV Control, PPM 5.2.1Primary Containment Control, and declare an Alert.
- B. PPM 5.1.2 RPV Control ATWS, PPM 5.3.1 Secondary Containment Control, and declare an Unusual Event.
- C. PPM 5.1.1 RPV Control, PPM 5.4.1 Radioactive Release Control, and declare a Site Area Emergency.
- D. PPM 5.4.1 Radioactive Release Control, PPM 5.2.1 Primary Containment Control, and declare a General Emergency

ANSWER: C

QUESTION TYPE: SRO

KA # & KA VALUE: 295038EA2.03 3.5/4.3 10CFR55.41, 43

REFERENCE: PPM 5.1.1, rev 14, 5.4.1, rev 11, and 13.1.1, rev 26, pages 19 and 32

SOURCE: **EXAM BANK QUESTION – EX98026 – MODIFIED-** SRO T1, GP1, #23

LO: 8017

RATING: H3

ATTACHMENT: YES - 13.1.1, rev 26, pages 19 and 32

JUSTIFICATION: Entry conditions are met for PPM 5.1.1 and 5.4.1 and an Emergency Classification of SAE from the Turbine building monitor and level LT TAF. C is correct.

WNP-2 WRITTEN EXAMINATION

QUESTION # 81

EXAM KEY

10/23/2000

EX00081

Which ONE of the following describes the reason for ensuring boron injection prior to the Boron Injection Initiation Temperature?

- A. The magnitude of power oscillations is reduced by the initiation of the SLC System as the boron concentration in the core increases.
- B. Inlet subcooling is reduced by the early injection of boron into the core, which reduces the magnitude of power oscillations.
- C. Boron injection with increased core inlet subcooling is more effective at reducing core power during an ATWS.
- D. Boron enters the core more quickly at higher power levels and is more effective at reducing core power.

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295037EK1.03 4.2/4.4 10CFR55.41

REFERENCE: PPM 5.0.10 Flowchart Training Manual rev 6, page 191

SOURCE: **NEW QUESTION** – SRO T1, GP1, #26 RO T1, GP1, #11

LO: 8086

RATING: L4

ATTACHMENT: NONE

JUSTIFICATION: PPM 5.0.10 early Boron injection reduces the magnitude of power oscillations during an ATWS. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 82

EXAM KEY

10/23/2000

EX00082

Which ONE of the following describes the basis for the Drywell Temperature entry condition?

The entry condition is...

- A. the highest drywell temperature below which action can be taken and still maintain drywell temperature less than the design temperature during a DBA LOCA.
- B. the most limiting drywell temperature LCO that provides advance warning of potential emergency conditions, allowing action to prevent more severe consequences.
- C. the most limiting drywell temperature LCS that provides advance warning of potential emergency conditions, allowing action to prevent more severe consequences.
- D. the highest drywell temperature below which action can be taken and still maintain drywell temperature less than the design temperature during a 100% power isolated ATWS.

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 295012AA2.01 3.8/3.9 10CFR55.41, 43

REFERENCE: PPM 5.0.10 Flowchart Training Manual rev 6, page245

SOURCE: **NEW QUESTION** – SRO T1, GP2, #7

LO: 8040

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: The entry condition for drywell temperature is the drywell average temperature LCO.
B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 83

EXAM KEY

10/23/2000

EX00083

A transient has occurred causing combustible levels of H₂ in the Drywell and combustible levels of O₂ in the Wetwell. Wetwell level is 36 feet. The direction has been given to purge the wetwell with the Low Flow N₂ system without an established vent path.

Concerning these conditions, which ONE of the following describes the result of this direction?

- A. The O₂ in the wetwell combines with the N₂ purge and reduces the possibility of a deflagration in the containment.
- B. A Wetwell N₂ purge forces the O₂ atmosphere through the wetwell, reducing the amount of O₂ entering the drywell.
- C. The nitrogen purge may cause the loss of the Wetwell to Drywell Interface and the loss of the Pressure Suppression Function.
- D. A loss of containment integrity and an uncontrolled release of radioactivity to the environment may occur.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 500000EK2.09 3.0/3.3 10CFR55.41

REFERENCE: PPM 5.0.10 rev 6, page 279

SOURCE: **NEW QUESTION** – SRO T1, GP1, #26 RO T1, GP1, #13

LO: 8438

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the N₂ and O₂ do not combine. B is incorrect because the flowpath is through the vacuum breakers straight into the drywell. C is incorrect because the N₂ purge without vent increases peak containment pressure during a deflagration. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 84

EXAM KEY

10/23/2000

EX00084

The plant is operating at 90% power with Condensate Demineralizers A through E in service, when the RW Control Room Operator notices a sudden and substantial decrease in Condensate Demineralizer ΔP .

Which ONE of the following describes the cause to this indication?

- A. Uncontrolled increase in RRC-P-1A and 1B speed.
- B. High level trip of the 6A Feedwater Heater.
- C. A broken air line to COND-V-76 Condensate Demin Bypass
- D. A broken air line to COND-V-211A Condensate Demin 1A inlet.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295019AK2.11 2.5/2.6 10CFR55.41

REFERENCE: PPM 4.8.1.1 rev 15, page 11

SOURCE: **NEW QUESTION** – SRO T1, GP2, #9 RO T1, GP2, #10

LO: 7605

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A loss of air to COND-V-76 causes the valve to fail open and a reduction in the indicated ΔP . A, B, and C cause ΔP to increase. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 85

EXAM KEY

10/23/2000

EX00085

The plant was operating at 99% power when a fire caused the control room to be abandoned. SW-P-1A is inoperable due to an overcurrent lockout. There has been a complete loss of offsite power.

Which ONE of the following is correct for these conditions?

- A. From the Remote Shutdown panel, operate RCIC and RHR-P-2B for reactor level control and Suppression Pool Temperature control.
- B. From the Alternate Remote Shutdown panel, operate RHR-P-2B for Suppression Pool Temperature control.
- C. From the Remote Shutdown panel, operate RCIC and RHR-P-2A for reactor level control and Suppression Pool Temperature control.
- D. From the Alternate Remote Shutdown panel, operate RHR-P-2A for Suppression Pool Temperature control.

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 262001K1.06 3.6/3.9 10CFR55.41

REFERENCE: 82-RSY-1600-T3 pages 2 and 3

SOURCE: **NEW QUESITON** – SRO T2, GP1, #18 T2, GP2, #15 **WNP-2 IPE**

LO: 5585

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: Only Div 2 AC equipment (RHR-B and SW-B) and RCIC and can be operated from the RSP. RCIC cannot be operated from the ARS panel, RHR-A can be. With SW-P-1A out of service, the DIV 1 DG cannot be operated. The only combination of equipment available and operable under these conditions, is A. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 86

EXAM KEY

10/23/2000

EX00086

The plant is in MODE 5 with a valid isolation signal from high drywell pressure signal testing. Single control rod scram testing is underway following CRD Drive rebuilds. Annunciator REACTOR BLDG FLOOR SUMP R3 LEVEL HI-HI (HPCS Pump Room) illuminates.

Which ONE of the following is the cause of this annunciator?

- A. A broken Drywell cooler supply (RCC) line.
- B. A large packing leak on CRD Pump 1A.
- C. Hi Scram discharge volume flow rate.
- D. A leak on the suction flange of SLC-P-1A.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 290001K4.03 2.8/2.9 10CFR55.41

REFERENCE: 82-RSY-0100-T6 pages 10 and 13

SOURCE: **NEW QUESTION** - SRO T2, GP1, #23 RO T2, GP2, #17

LO: 5327

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: Neither C nor D drains to FDR-R-3. The broken RCC line is isolated from the sump because of the high drywell pressure. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 87

EXAM KEY

10/23/2000

EX00087

The plant is in MODE 5 with CRD and RWCU maintaining reactor level at +85 inches. Both RHR-P-2A and 2B in operation in Shutdown Cooling when DIV 1 125 VDC is lost. Before the loss of DC can be corrected, a leak in the discharge of RHR-P-2A causes reactor level to decrease rapidly.

Assuming no operator actions, which ONE of the following is correct for these conditions?

When reactor level decreases to less than +13 inches...

- A. RHR-P-2A and 2B trip, RHR-V-8, 9, 53A, 53B, and 23 close.
- B. RHR-P-2A and 2B trip, RHR-V-9, 53A, 53B close and RHR-V-8 and 23 remain open (if open).
- C. RHR-P-2A trips, RHR-V-8, 9, 53A, 53B, and 23 (if open) close.
- D. RHR-P-2B trips, RHR-V-8, 9, 53A, and 53B close, RHR-V-23 remains open (if open).

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 205000K6.02 2.7/2.9 10CFR55.41

REFERENCE: 82-RSY-1300-T3 pages 12, 44 figure 10B, and 10E

SOURCE: **NEW QUESTION** – SRO T2, GP2, #5 T2, GP2, #6

LO: 5781

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: Div 1 DC provides control power for RHR-P-2A and is the power supply for RHR-V-23. Without DC, 2A will not trip and 23 will not close.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 88

EXAM KEY

10/23/2000

EX00088

The plant is operating at 98% power with a Low Pressure Turbine inlet temperature of 550°F at 145 psig.

Which ONE of the following is correct concerning the MSR superheat process?

- A. The MSR Second Stage Reheater uses cross-under steam to add enough enthalpy to the low pressure turbine inlet for 203°F of superheat.
- B. The MSR Second Stage Reheater uses high temperature saturated main steam to add enough enthalpy to the low pressure turbine inlet for 186°F of superheat.
- C. The MSR First Stage Reheater uses high temperature saturated main steam to add enough enthalpy to the low pressure turbine inlet for 203°F of superheat.
- D. The MSR First Stage Reheater uses cross-under steam to add enough enthalpy to the low pressure turbine inlet for 186°F of superheat.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 239001A1.02 2.6/2.6 10CFR55.41

REFERENCE: 82-RSY-0100-T5 pages 6 and 7

SOURCE: **NEW QUESTION** – SRO T2, GP3, #2 RP T2, GP2, #12

LO: 7747

RATING: H3

ATTACHMENT: YES - Steam Tables

JUSTIFICATION: The MSR Second stage reheater uses Main Steam. The high temperature steam, even though it is saturated, adds enough enthalpy to the inlet to the LP turbine to give 186°F superheat with the given conditions. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 89

EXAM KEY

10/23/2000

EX00089

A change has been proposed to a system. A 10CFR50.59 Screening is being performed as part of the Screening for Licensing Basis Changes. It has been determined that the proposed change involves a change to Tech Specs.

Which ONE of the following describes whom the Qualified Preparer must notify?

- A. Licensing
- B. Engineering
- C. Corporate Nuclear Safety Review Board
- D. Plant Operations Committee

ANSWER: A

QUESTION TYPE: SRO

KA # & KA VALUE: 2.2.5 1.6/2.7 10CFR55.43

REFERENCE: PPM 1.3.43 rev 15, page9

SOURCE: **NEW QUESTION** – SRO T3, #8

LO: 9517

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: Any time an activity or change causes a change to Tech Specs, Licensing must be contracted to determine if there is reason to proceed with the change. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 90

EXAM KEY

10/23/2000

EX00090

PPM 5.4.1 Radioactivity Release Control has been entered. Direction is given in the procedure to enter PPM 5.1.1 RPV Control.

Which ONE of the following describes the basis for this direction?.

- A. Forces the reduction of reactor level and a corresponding decrease in reactor power.
- B. Places the energy contained in the reactor at the lowest value possible.
- C. Allows for emergency depressurization and a resultant reactor power reduction.
- D. Reduces the energy of the RPV discharge to the environment to decay heat levels.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295038EK1.02 4.2/4.4 10CFR55.41

REFERENCE: PPM 5.0.10 rev 6, page 303

SOURCE: **NEW QUESTION** – SRO T1, GP1, #24 RO T1, GP2, #17

LO: 8480

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: The basis for PPM 5.4.1 states the direction to scram the reactor, if not already done, reduces the remaining energy levels to the decay heat level. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 91

EXAM KEY

10/23/2000

EX00091

The plant is in MODE 5 with fuel movement underway. The CRO notes both EDR-V-394 and 395, EDR-P-5 Discharge to Waste Collector Tank in Radwaste, have closed.

Which ONE of the following causes these indications?

- A. Reactor Water Level -35 inches
- B. Drywell pressure 1.59 psig
- C. ARM-RIS-23, CRD Pump Room, 215 mr/hr
- D. Rx Building Exhaust Plenum 16 mr/hr

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295036EA1.04 3.1/3.4 10CFR55.41

REFERENCE: 82-RSY-0100-T6 pages 12 and 13

SOURCE: **NEW QUESTION** – SRO T1, GP, #16 RO T1, GP3, #4

LO: 5333

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: EDR-V-394 and 395 isolate on an FAZ signal. D is correct.
COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 92

EXAM KEY

10/23/2000

EX00092

The plant is operating at 99% power when a seal failure on RWCU-P-1A causes a high ambient temperature in RWCU-P-1A pump room.

Which ONE of the following is a result of this failure?

- A. RWCU-V-1 Inboard Isolation only auto closes.
- B. RWCU-FCV-33 Blowdown Flow Control auto closes (if open).
- C. RWCU-V-104 Filter Demin bypass auto opens.
- D. RWCU-V-35 Discharge to Radwaste auto closes.

ANSWER: B

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 204000A2.08 2.9/3.1 10CFR55.41

REFERENCE: 82-RSY-1200-T1 page 6

SOURCE: **NEW QUESTION** – SRO T2, GP2, #4 RO T2, GP2, #2

LO: 5035

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: RWCU-V-35 closes on any isolation of RWCU. V-1 never closes by itself on isolation. RWCU-V-35 and 104 have no auto functions.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 93

EXAM KEY

10/23/2000

EX00093

The plant was operating at 99% power when a LOCA occurred. The CRS directed the CRO to start MSLC. Both Inboard and Outboard Systems started and all auto actions occurred. The CRO checked the system 5 minutes later and found a normal system lineup except, MSLC-V-1A, 2A, and 3A, Inboard Main Steam Line "A" Bleed and Depressurization Valves were closed.

Which ONE of the following caused these indications?

- A. Steam Line pressure between the "A" MSL MSIVs greater than 3.7 psig, 1 minute after initiation.
- B. Steam Line pressure greater than 41 psig downstream from the outboard "A" MSL MSIVs.
- C. Reactor pressure greater than 41 psig.
- D. MSLC-FN-1 dilution flow greater than 50 scfh for 10 minutes following system initiation.

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 239003K1.01 3.3/3.4 10CFR55.41

REFERENCE: 82-RSY-0500-T3 page 7

SOURCE: **NEW QUESTION** – SRO T2, GP2, #9 RO T2, GP3, #3

LO: 7612

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: If the area between the MSLs is not less than 3.7 psig in the first 60 seconds of system operation, the respective MSLC valves for that steam line close. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 94

EXAM KEY

10/23/2000

EX00094

Which ONE of the following describes the reason for a Recirc Pumps speed runback at the scram setpoint for reactor level rather than a Recirc Pump trip at the same level?

The runback ...

- A. adds enough negative reactivity to overcome the effect of void collapse following the scram.
- B. provides for adequate core flow during possible ATWS conditions.
- C. prevents fuel element vibration from high flow/low power conditions.
- D. prevents unnecessary delays in scram recovery due to vessel bottom head thermal stratification.

ANSWER: D

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295006AK3.06 3.2/3.3 10CFR55.41

REFERENCE: FSAR Chapter 7 pages 7.6-37 and 7.7-17

SOURCE: **NEW QUESTION** – SRO T1, GP1, #4 RO T1, GP1, #3

LO: 5591

RATING: L4

ATTACHMENT: NONE

JUSTIFICATION: The FSAR states the Recirc Pump speed is reduced to 15 hz (25%) to prevent delays in scram recovery due to bottom head thermal stratification.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 95

EXAM KEY

10/23/2000

EX00095

LER 94-021 discussed a modification to the control room floor that would have prevented the control room from being pressurized by WMA-FN-54B during an accident.

Which ONE of the following describes the document required to prevent this occurrence?

- A. 10CFR50.54X Evaluation
- B. 10CFR50.59 Safety Evaluation
- C. Licensing Basis Impact Evaluation
- D. Regulatory Commitment Change Form

ANSWER: B

QUESTION TYPE: SRO

KA # & KA VALUE: 290003 2.2.11 2.5/3.4 10CFR55.43

REFERENCE: 1.3.9 rev 26, pag11, Form 24431 Screening for Licensing Basis Changes, and WNP-2 LER 94-021.

SOURCE: **BANK QUESTION 98 EXAM #EX98079 – MODIFIED** – SRO T2, GP2, #11

LO: 7847

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: B is correct because any change that could affect the capability of a system to perform its safety function requires a 10CFR50.59 Safety Evaluation. A is incorrect because 10CFR50.54X is used for a deviation from licensed conditions or Tech Specs to preserve the health and safety of the public. C is incorrect because it is used for situations other than a 50.59 Safety Evaluation. D is incorrect because this is used to change or delete commitments with low safety value.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 96

EXAM KEY

10/23/2000

EX00096

The plant is operating at 99% power with a small steam leak in the drywell. RCIC is in operation for a surveillance. The following conditions exist

Wetwell temperature	91°F
Drywell temperature	132°F
Wetwell level	+1.8 inches
Drywell pressure	1.1 psig

Which ONE of the following is correct concerning these conditions?

- A. One loop of RHR in operation is adequate for wetwell temperature reduction.
- B. HPCS is operated with flow to the Condensate Storage Tanks to reduce the increasing suppression pool level.
- C. Available drywell cooling is operated prior to initiation of more complex actions to terminate the increasing drywell temperature.
- D. The drywell is vented through CEP-V-1A and CEP-V-2A, 24 inch drywell vent valves to prevent exceeding the drywell initiation pressure.

ANSWER: C

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 295028EK3.04 3.6/3.8 10CFR55.41

REFERENCE: PPM 5.0.10 rev 6, page 250

SOURCE: **NEW QUESTION** – SRO T1, GP2, #12 RO T1, GP2, #13

LO: 8312

RATING: H3

ATTACHMENT: YES – DSIL Curve

JUSTIFICATION: The use of available drywell cooling is directed prior to the initiation of more complex actions by PPM 5.0.10. A, B, and C are all incorrect actions for the given conditions. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 97

EXAM KEY

10/23/2000

EX00097

The plant is operating at 98% power. RHR-P-2C is in operation for a full flow test procedure when it trips on overcurrent. An operator is dispatched and reports via radio that RHR-P-2C motor is on fire.

Which ONE of the following is correct for these conditions?

Use...

- A. MS-LR/PR-623A for accurate reactor level indication and start RHR-P-2B within 1 hour.
- B. MS-LR/PR-623B for accurate reactor level indication and start RHR-P-2B within 1 hour.
- C. RFW-LI-606A for accurate reactor level indication and start RHR-P-2A within 1 hour.
- D. RFW-LI-606B for accurate reactor level indication and start RHR-P-2A within 1 hour.

ANSWER: A

QUESTION TYPE: RO/SRO

KA # & KA VALUE: 600000AK1.01 2.5/2.8 10CFR55.41

REFERENCE: PPM 4.12.4.1 Fire rev 26, pages 13

SOURCE: **NEW QUESTION** – SRO T1, GP2, #17 RO T1, GP2, #18

LO: NO LO

RATING: H3

ATTACHMENT: YES - PPM 4.12.4.1 Fire rev 26, pages 1-5, 10-13, 30-31

JUSTIFICATION: For an Appendix R Fire, actions are directed by Att. 7.1. They are the actions of selection A. B-D are incorrect because of the level indication and the RHR pump listed.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 98

EXAM KEY

10/23/2000

EX00098

The plant is operating at 98% power. At 0700 Monday it was reported that the lube oil inventory for DG-1 was 300 gal. No lube oil has been procured for DG-1. At 1500 Wednesday, RHR-P-2C is declared inoperable due to a motor failure.

Which ONE of the following is correct concerning these conditions?

- A. Restore RHR-P-2C to operable status in 7 days from 1500 Wednesday.
- B. Restore DG-1 to operable status by 0700 Thursday.
- C. Perform SR 3.8.1.1 for OPERABLE offsite circuits by 0800 Wednesday, and restore DG-1 to OPERABLE status by 0700 Saturday.
- D. Take action within 1 hour (from 1900 Wednesday) to place the unit in MODE 2 within 7 hours, MODE 3 within 13 hours and MODE 4 within 37 hours.

ANSWER: D

QUESTION TYPE: SRO

KA # & KA VALUE: 2.2.23 2.6/3.8 10CFR55.43

REFERENCE: TS. 3.0.3, 3.5.1, 3.8.1, 3.8.3

SOURCE: **NEW QUESTION** – SRO T3, #10

LO: 9540

RATING: H4

ATTACHMENT: YES - TS. 3.0.3, 3.5.1, 3.8.1, 3.8.3

JUSTIFICATION: The supported systems of DG-1 do not have to be declared inop until 4 hours following the inoperability of a redundant system. DG-1 support systems are declared inop at 1900 Wednesday. This causes 3 ECCS systems to be inop and requires entry into TS 3.0.3. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 99

EXAM KEY

10/23/2000

EX00099

The reactor was operating at 78% power coming out of a refueling outage. A large steam leak in the drywell caused the following plant conditions:

Wetwell level	39 feet
Drywell pressure	30 psig
Reactor pressure	214 psig
Reactor level	-145 inches and stable

RCIC tripped several minutes ago.

Which ONE of the following caused the RCIC trip?

- A. Low reactor level.
- B. Isolation from low reactor pressure.
- C. Low suction pressure.
- D. High exhaust pressure.

ANSWER: D

QUESTION TYPE: SRO

KA # & KA VALUE: 217000 2.1.7 3.7/4.4 10CFR55.43

REFERENCE: PPM 5.0.10 rev 6, page 70

SOURCE: **BANK QUESTION – 98 EXAM EX98046 – MODIFIED** –SRO T2, GP1, #3

LO: 5722

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because there is no trip on low reactor level. Low pressure isolation has not yet been reached for B. C is incorrect because suction pressure would be relatively high from the conditions given. D is correct based on the explanation of Caution 4 in the EOPs.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 100

EXAM KEY

10/23/2000

EX00100

The plant is operating at 97% power with a discharge from the Waste Collector Tank to the Circ. Water Blowdown line underway. Process Rad Monitor FDR-RIS-606 (Radwaste Effluent) fails downscale.

Which ONE of the following is correct concerning these conditions?

- A. The discharge may continue for up to 30 days provided grab samples are collected and analyzed at least once every 12 hours.
- B. The discharge may continue for up to 30 days provided that the discharge flowrate is verified at least once every 4 hours.
- C. Stop the discharge. The discharge may continue when 2 independent samples have been analyzed and 2 technically qualified members of the plant staff have independently verified the release calculations and the discharge valve lineup.
- D. Stop the discharge. The discharge may continue when a temporary monitor has been installed and the monitor calibration has been verified by analysis of 2 independent batch samples.

ANSWER: C

QUESTION TYPE: SRO

KA # & KA VALUE: 2.3.3 1.8/2.9 10CFR55.43

REFERENCE: ODCM 6.1.1 table 6.1.1.1-1

SOURCE: NEW QUESTION – SRO T3, #12

LO: 7721 5650

RATING: H3

ATTACHMENT: YES - ODCM 6.1.1 table 6.1.1.1-1, PPM 4.602.A5.6-6

JUSTIFICATION: A and B are incorrect because they both allow the discharge to continue and the actions given are for the SW monitors and for the flowrate monitor of Rad Waste. D is incorrect because there is no action allowing the use of a temporary monitor in the place of FDR-RIS-606. C is correct. This is the action given in the ODCM.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 101

EXAM KEY

10/23/2000

EX00101

The plant was operating at 40% power when an automatic reactor scram occurred. After the plant was stabilized, the CRO noted EDR-V-19, EDR-V-20, FDR-V-3, and FDR-V-4 on P601 had auto closed.

Which ONE of the following describes the reason for these indications?

- A. Small steam leak in the drywell.
- B. Large vacuum leak in the main condenser.
- C. Reactor level +5 inches.
- D. All four BPVs fail open.

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 295010AA1.02 3.3/3.6 10CFR55.41, 43

REFERENCE: 82-RSY-0100-T6 page10

SOURCE: **NEW QUESTION** – RO T1, GP1, #5

LO: 5329

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: EDR-V-19 and 20 auto close on a high drywell pressure or low reactor level –50 inches. B, C, nor D cause either a high drywell pressure nor a –50 inch isolation. A causes these valves to close on a high drywell pressure.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 102

EXAM KEY

10/23/2000

EX00102

The plant was operating at 98% power when a Main Turbine Trip causes a reactor scram. The lights in the control room go out for approximately 4 seconds and then some of the lights come back on.

Which ONE of the following is correct for these conditions?

- A. BKR S-1, S-2, and S-3 have closed and are providing power.
- B. BKR N-1, N-2, and N-3 have closed and are providing power.
- C. SM-7 and SM-8 are powered from DG-1 and DG-2.
- D. SM-7 and SM-8 are powered from TR-B.

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 295003AA2.05 3.9/4.2 10CFR55.41, 43

REFERENCE: 82-RSY-1000-T5 page 29

SOURCE: **NEW QUESTION** – RO T1, GP2, #4

LO: 5047f

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the control room lights would not have gone out if the S BKRs had closed. B is incorrect because the N BKRs are the normal supply when the main turbine is on the line. C is incorrect because the light would have been out for at least 7 seconds if the DGs were powering the bus. D is correct because all control room lights, except those powered from MC-7C and 7E, and 8C and 8E would come back on when SM-7 and SM-8 were repowered.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 103

EXAM KEY

10/23/2000

EX00103

The plant was operating at 98% power when a FWLC failure caused the speed of both Reactor Feed Pumps to ramp up.

Which ONE of the following is correct concerning these conditions?

- A. Before reactor level reaches +108 inches, manually scram the reactor, close the inboard MSIVs, and trip both reactor feed pumps.
- B. Before reactor level reaches +108 inches, manually scram the reactor, close the inboard MSIVs, and trip all condensate booster pumps.
- C. When reactor level exceeds +80 inches, close all MSIVs, manually scram the reactor, and trip both feed pumps.
- D. When reactor level exceeds +80 inches, close all MSIVs, manually scram the reactor, and trip all condensate booster pumps.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 295008 2.4.10 3.0/3.7 10CFR55.41, 43

REFERENCE: PPM 4.2.1.2 rev12, page 3

SOURCE: **BANK QUESTION - #5552 – MODIFIED** – RO T1, GP2, #5

LO: 6720

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: B is correct per the direction given in PPM 4.2.1.2.
COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 104

EXAM KEY

10/23/2000

EX00104

The plant is operating at 97% power. The following conditions exist:

Reactor pressure	1022 psig
Reactor level	+36 inches
Suppression Pool Temperature	84°F and up slow
Suppression Pool Level	+1 inch and up slow
RCIC	In operation for a surveillance

Annuciator P603.A7.1-1 ANNUNCIATOR 125 VDC LOSS illuminates.

Which ONE of the following is correct for these conditions?

- A. Station a CRO at P601/P602, P603, and Board A/B/C to monitor plant parameters. Do not change the operational status of any plant systems except for emergencies.
- B. Monitor suppression pool temperature at least 1 time every 5 minutes and station a CRO to continuously monitor level, pressure, and power.
- C. Immediately scram the reactor.
- D. Start a controlled shutdown.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 295013 2.4.32 3.3/3.5 10CFR55.41, 43

REFERENCE: PPM 4.603.A7.1-1 rev23, page 4, PPM4.7.8.3 rev 4 page 2, TS 3.6.2.1 SR3.6.2.1.1

SOURCE: **NEW QUESTION** – RO T1, GP2, #7

LO: 6845

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because there is no direction to station CROs at 3 panels, nor is there direction to not operate equipment except emergencies. C is incorrect because there is no direction to immediately scram the reactor. D is not correct because there is no direction given to start a shutdown. B is correct because of the direction given in the Ann. response procedure and TS.

EX0105

WNP-2 WRITTEN EXAMINATION

QUESTION # 105

EXAM KEY

10/23/2000

The plant was operating at 96% power when a LOCA occurred. The following conditions now exist:

Reactor Pressure	26 psig
Reactor level	+2 inches and stable on the NR
Drywell temperature	210 °F
Drywell pressure	22 psig

Which ONE of the following is the correct level instrument to use under these conditions?

- A. Narrow Range
- B. Upset Range
- C. Wide Range
- D. Shutdown/Flooding Range

ANSWER: C

QUESTION TYPE: RO

KA # & KA VALUE: 295028EA2.03 3.7/3.9 10CFR55.41, 43

REFERENCE: PPM 5.0.10 rev 6, page 64

SOURCE: **NEW QUESTION** – RO T1, GP2, #14

LO: 8039

RATING: H3

ATTACHMENT: YES – PPM 5.2.1 figure A, and Caution 1

JUSTIFICATION: With the drywell and reactor conditions given, A, B, and D are below their usable level indications. C is the only in its usable range for the given conditions.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 106

EXAM KEY

10/23/2000

EX00106

A fire in the Circwater Pumphouse causes both TSW Pumps to trip and lockout.

Which ONE of the following can be cooled by an alternate system?

- A. Control and Service Air Compressors
- B. Turbine Lube Oil Coolers
- C. Isophase Bus Ducts
- D. Reactor Feed Pump Turbine Lube Oil Coolers

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 600000AA2.16 3.0/3.5

REFERENCE: 82-RSY-0900-T6 page 25

SOURCE: **BANK QUESTION #3891 – MAJOR MODIFICATION – RO T1, GP2, #19**

LO: 5378

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: B, C, and D are all TSW loads in the turbine building that only are cooled by TSW. The CAS Air Compressors are the only loads that have back up cooling provided by firewater. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 107

EXAM KEY

10/23/2000

EX00107

Annunciator 4.FCP.1.3-2, RX BLDG 471' GENERAL AREA has just alarmed. It is a fire alarm. Shortly thereafter, Ops 2 reports on the radio that there is heavy smoke coming up the NW stairwell on the 501 level in the Reactor Building.

Which ONE of the following is correct for this condition?

Immediately ...

- A. Sound the alerting tone for ≈5 seconds.
Announce the location of the fire and direct the Fire Brigade with the ROLM PA.
Notify Security to call out the Hanford Fire Department.
- B. Sound the alerting tone for ≈5 seconds.
Announce the location of the fire and direct the Fire Brigade with the ROLM PA.
Repeat these 2 steps.
- C. Notify the Hanford Fire Department by manually depressing the notification pushbutton.
Announce the location of the fire with the ROLM PA.
Repeat these 2 steps.
- D. Notify the Hanford Fire Department by manually depressing the notification pushbutton.
Announce the location of the fire with the ROLM PA.
Notify the Fire Brigade of the location of the fire by radio.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 295032EK1.01 3.6/3.8 10CFR55.41

REFERENCE: 4.FCP.1.3-2 rev 8, page 17, 4.12.4.1 rev 26, page 2

SOURCE: NEW QUESTION – RO T1, GP3, #2

LO: 6902

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: C is the correct response. It contains the immediate actions for a fire once evidence of a fire exists in the area indicated by the annunciator.

WNP-2 WRITTEN EXAMINATION

QUESTION # 108

EXAM KEY

10/23/2000

EX0108

The plant is shutdown for a refueling outage. The following conditions exist:

SM-8	out of service for bus maintenance
ROA-FN-1A	In automatic operation
REA-FN-1A	In automatic operation

REA-FN-1A trips due to an overcurrent. Due to workload in the control room, the CRO does not get back to Board R for 4 minutes.

Which ONE of the following is correct for these conditions?

Immediately ...

- A. Trip ROA-FN-1A
Start Lag Fan SGT-FN-1B1 for Secondary Containment Pressure Control
- B. Trip ROA-FN-1A
Start Lead Fan SGT-FN-1B2 for Secondary Containment Pressure Control
- C. Ensure ROA-V-1, ROA-V-2, REA-V-1, and REA-V-2 are closed.
Start Lag Fan SGT-FN-1A2 for Secondary Containment Pressure Control
- D. Ensure ROA-V-1, ROA-V-2, REA-V-1, and REA-V-2 are closed.
Start Lead Fan SGT-FN-1A1 for Secondary Containment Pressure Control

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 295035EK2.02 3.6/3.8 10CFR55.41

REFERENCE: PPM 4.10.1.1 rev 10, page2

SOURCE: **NEW QUESTION** – RO T1, GP3, #3

LO: 7731

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A and B are both incorrect because ROA-FN-1A trips on high reactor building pressure caused by the trip of REA-FN-1A. Also SGT-FN-1B1 has no power. C is incorrect because SGT-FN-1A2 has no power. D is the immediate action for a loss of reactor building ventilation with SM-8 de-energized.

WNP-2 WRITTEN EXAMINATION

QUESTION # 109

EXAM KEY

10/23/2000

EX00109

Preparations are underway for control rod withdrawal for a plant startup. The CRO notices CRD System flow at 82 gpm.

Which ONE of the following is correct for these indications?

- A. Double notching could occur in response to single notch withdraw signals.
- B. Graphitar seal failure could result from thermal shocking.
- C. Control rod overtravel could occur when a rod is withdrawn to position 48.
- D. Low drive header ΔP could result in the inability to move control rods.

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 201001A2.12 2.8/2.9 10CFR55.41

REFERENCE: LO000142 pages 24 and 25

SOURCE: **NEW QUESTION** – RO T2, GP1, #1

LO: 5186

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: B is incorrect because high system flow does not cause thermal shocking of the graphitar seals. C is incorrect because overtravel comes from a loss of control rod coupling. D is incorrect because high system flow results in high drive header ΔP . A is correct because the resulting high system ΔP causes double notching when a single rod notch is requested.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 110

EXAM KEY

10/23/2000

EX00110

The following plant conditions exist following an extended run at rated conditions:

Reactor level	-137 inches for the last 3 minutes – now up slow
SM-7	out of service
HPCS-P-1	in operation and injecting into the core
TRS	Out of service – Sudden Pressure Relay
RHR-P-2B and 2C	Manually tripped off
ADS	NOT inhibited

Which ONE of the following describes the ADS response to a manual start of RHR-P-2C?

- A. All ADS SRVs open immediately when the breaker for RHR-P-2C closes.
- B. RHR-P-2C discharge pressure GE 125 psig causes all ADS SRVs to open immediately.
- C. RHR-P-2C has no effect on the initiation logic for ADS.
- D. All ADS SRVs open 105 seconds following the start of RHR-P-2C.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 203000K3.03 4.2/4.3 10CFR55.41

REFERENCE: 82-RSY-1100-T3 pages, 2 and 3

SOURCE: NEW QUESTION – RO T2, GP1, #3

LO: 5071

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: ADS initiates 105 seconds following level < -129 inches if there is sufficient discharge pressure from an ECCS pump. Since water level has been at -137 inches for 3 minutes, all prerequisites for auto initiation except pump discharge pressure have been satisfied. When sufficient discharge pressure from RHR-P-2C is generated the valves open immediately. B is correct.

COMMENTS:

EX00111

WNP-2 WRITTEN EXAMINATION

QUESTION # 111

EXAM KEY

10/23/2000

Reactor level is -209 inches and up slow with only LPCS-P-1 and HPCS-P-1 in operation with a combined flow rate of 7500 gpm.

Which ONE of the following is correct concerning these conditions?

Adequate core cooling is assured by ...

- A. steam cooling with injection.
- B. spray cooling
- C. submergence.
- D. steam cooling without injection

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 209001K5.04 2.8/2.9 10CFR55.41

REFERENCE: PPM 5.0.10 rev 6, pages 20 and 21

SOURCE: **NEW QUESTION** – RO T2, GP1, #5

LO: 8040

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: Adequate core cooling for spray cooling is defined as reactor level $\geq 2/3$ (-210 inches) core height and both HPCS and LPCS in operation with a combined flow rate of >6000 gpm. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 112

EXAM KEY

10/23/2000

EX00112

The reactor was at 100% power when a loss of SM-1 occurred. Several minutes following the transient, a high suppression pool level annunciator is received.

Which ONE of the following is the reason for this annunciator?

- A. HPCS on minimum flow from the CSTs causes suppression pool level to increase.
- B. RCIC steam exhaust to the suppression pool causes a temperature increase and a false increasing level indication.
- C. HPCS on minimum flow causes air entrainment in the suppression pool and a false indicated level increase.
- D. RCIC is on minimum flow from the CSTs causes suppression pool level to increase.

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 209002A4.09 3.4/3.5 10CFR55.41

REFERENCE: 82-RSY-0900-T3, page 9

SOURCE: **BANK QUESTION – 98 EXAM #EX98044 - RO T2, G1, #6**

LO: 5421

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: B is incorrect because a temperature increase from RCIC would not give a false high level indication. C is incorrect because the level upset from minimum flow would not cause a steadily increasing level. D is incorrect because the min flow valve is closed when RCIC is injecting into the vessel. A is correct because pump operation on minimum flow causes increasing wetwell level (with suction from CST as in this case).

COMMENTS:

EX00113

WNP-2 WRITTEN EXAMINATION

QUESTION # 113

EXAM KEY

10/23/2000

The plant has just scrambled from 99% power. Reactor level is –17 inches and is being returned to the normal band with Feedwater. The CRS has directed you to verify isolations.

Which ONE of the following is correct for these conditions?

Isolations can be verified by touching the status bar at the bottom of the GDS Screen labeled ...

- A. Containment Integrity
- B. Radioactivity Control
- C. Coolant System Integrity
- D. Overview

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 2.1.19 3.0/3.0 10CFR55.45

REFERENCE: 82-RSY-1000-T2 page12

SOURCE: **NEW QUESTION** – RO T3, #3

LO: NO LO

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: B, C, and D are all incorrect because they have no way to verify isolations. Only A, Containment Integrity has the group isolation bar graph.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 114

EXAM KEY

10/23/2000

EX00114

COND-P-2A has been tagged out for maintenance. The clearance has been cleared and the direction to remove the danger tags and open the suction and discharge valves has been given. The suction valve has been opened, but the operator notes there is no danger tag on the discharge valve as required on the clearance order.

Which ONE of the following is correct for this condition?

- A. Continue restoration of the equipment and notify the Production RO when the restoration is complete.
- B. Continue restoration of the equipment and notify Operations Supervision when the restoration is complete.
- C. Stop restoration of the equipment and notify Operations Supervision.
- D. Stop restoration of the equipment and notify the Production RO.

ANSWER: C

QUESTION TYPE: RO

KA # & KA VALUE: 2.1.29 3.4/3.3 10CFR55.41

REFERENCE: SWP-OPS-03 rev6, page34

SOURCE: **NEW QUESTION** – RO T3, #2

LO: 6279

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: SWP-OPS-03 requires that when no tags are found on equipment that should have tags, restoration of the equipment must be stopped and Operations Supervision must be notified prior to continuing the restoration. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 115

EXAM KEY

10/23/2000

EX00115

The plant is in MODE 3 with a reactor level reduction through the A RHR Heat Exchanger Vents to the Suppression Pool. The Suppression Pool high level alarm has been sealed in for a period of time, when the HPCS Suction Switchover occurs.

Which ONE of the following describes the required action for these conditions?

- A. Restore suppression pool water level to within limits and restore HPCS suction to the CSTs within 12 hours.
- B. Restore suppression pool water level to within limits and restore HPCS suction to the CSTs within 2 hours.
- C. Enter PPM 5.2.1 Primary Containment Control and restore suppression pool water level to within limits in 12 hours.
- D. Enter PPM 5.2.1 Primary Containment Control and restore suppression pool water level to within limits in 2 hours.

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 209002 2.1.33 3.4/4.0 10CFR55.43

REFERENCE: WNP-2 LER 91-015, TS 3.6.2.2

SOURCE: **NEW QUESTION – RO T2, GP1, #7 WNP-2 LER 91-015**

LO: 5429/9582

RATING: H3

ATTACHMENT: YES – TS 3.6.2.2

JUSTIFICATION: The high level suppression pool suction switchover for HPCS occurs at +3 inches in the suppression pool. This level requires entry into PPM 5.2.1 Primary Containment Control. This is also above the LCO for suppression pool water level. TS require that suppression pool level be restored to within limits in 2 hours. There is no requirement to return the HPCS suction valves to CST suction. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 116

EXAM KEY

10/23/2000

EX00116

PPM 3.1.2 Reactor Plant Startup requires that SRMs be completely withdrawn when all IRMs are on Range 3 or higher.

Which ONE of the following describes the reason for this direction?

- A. SRM withdrawal at higher power levels may not be possible due to detector overheating and expansion.
- B. SRM insertion at high power levels leads to reduced life expectancy of the detector.
- C. SRM UPSCALE HI Rod Block is bypassed on IRM range 3.
- D. SRM UPSCALE HI HI trip is bypassed on IRM range 3.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 215004K5.03 2.8/2.8 10CFR55.41

REFERENCE: 82-RSY-0200-T2 pages 27 and 29

SOURCE: **BANK QUESTION #3710 – MODIFIED – RO T2, GP1, #8**

LO: 5935

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because there is no reference that states the detector may not be withdrawn because of heating. C and D are both incorrect because these trips are bypassed on IRM R8. SRM insertion at high power level leads to reduced life expectancy of the detector. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 117

EXAM KEY

10/23/2000

EX00117

The plant is in MODE 3 with a cooldown to cold conditions in progress. Reactor pressure is 192 psig. RCIC-P-3 (water leg pump) then shears the pump shaft. The first indication the crew receives of the shaft shear is a RCIC WATERLEG PUMP DISCH PRESS LOW annunciator.

Which ONE of the following is correct for these conditions?

- A. Reduce reactor pressure to LE 150 psig in 36 hours.
- B. Immediately start RCIC-P-1 with the arm and depress pushbutton.
- C. Perform a manual start of RCIC-P-1 using RCIC-V-1 as a steam throttle valve.
- D. Immediately verify by administrative means that HPCS is operable.

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 217000 2.1.33 3.4/4.0 10CFR55.43

REFERENCE: PPM 4.601.A4.1-4 rev 17, page 7 TS 3.5.3 RCIC System

SOURCE: **NEW QUESTION** – RO T2, GP1, #13

LO: 6926

RATING: H3

ATTACHMENT: YES – PPM 4.601.A4.1-4 rev 17, page 7 TS 3.5.3 RCIC System

JUSTIFICATION: RCIC WATERLEG PUMP DISCH PRESS LOW annunciator actuates at 67 psig. By procedure if the leg pump is not operating, and RCIC discharge pressure is LE 67 psig, RCIC-P-1 is to be inhibited by closing RCIC-V-1. This inops RCIC-P-1 and requires the response in D as long as pressure is GE 150 psig. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 118

EXAM KEY

10/23/2000

EX00118

The plant is operating at 97% power when Narrow Range “A” transmitter, RFW-DPT-4A fails upscale. Feedwater level control automatically selects the “B” level transmitter. Later in the shift, RFW-DPT-4A is repaired, but before it can be placed back in service, the “B” level transmitter fails downscale.

Which ONE of the following describes the plant response to these failures?

- A. The Programmable Logic Controller automatically selects the “C” level transmitter.
- B. The Programmable Logic Controller automatically reselects the “A” level transmitter.
- C. FWLC sees the level indicated downscale and increases feedwater flow to increase level.
- D. RFW speed controllers auto shift to MDEM and maintain current RFPT speed.

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 259002K4.06 3.1/3.2 10CFR55.41

REFERENCE: 82-RSY-0609-T4 page 8

SOURCE: **BANK QUESTION – 98 EXAM #EX98054 – RO T2, GP1, #25**

LO: 5400

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: As long as there is an available level transmitter to switch to, the PLC will auto swap to that input. It will not switch back to a level transmitter that has failed until the operator requests the transfer. It will only fail RFPT to manual after there are no more level input channels to change to.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 119

EXAM KEY

10/23/2000

EX00119

The plant is operating at 95% power with DG-1 in operation at idle speed for a surveillance. The Idle Speed Selector Switch is in the IDLE position. A DBA LOCA then occurs.

Which ONE of the following describes the condition of DG-1?

- A. At rated speed with the output breaker open.
- B. At rated speed with the output breaker closed.
- C. At idle speed with the output breaker open.
- D. At idle speed with the output breaker closed.

ANSWER: C

QUESTION TYPE: RO

KA # & KA VALUE: 264000A3.01 3.0/3.1 10CFR55.41

REFERENCE: 82-RSY-1300-T5 pages 23 and 36

SOURCE: **BANK QUESTION #6243** – RO T2, GP1, #28

LO: 5321

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: A DBA LOCA with the Idle Speed Selector Switch in the IDLE position allows an auto start but the Idle Switch limits speed. With the DG not at rated speed, the output breaker does not close. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 120

EXAM KEY

10/23/2000

EX00120

A control rod withdrawal is underway for a plant startup. All control rods in RWM Groups 1 and 2 have been withdrawn to position 48. The CRO selects the first rod in Group 3 and withdraws it from position 00 using the Continuous Withdraw pushbutton to position 04, where it stops by automatic action. No rod block annunciators are received on P603

Which ONE of the following is explains these conditions?

- A. A rod block has been applied by the RWM due to the selected control rod reaching its group 3 limit.
- B. The RMCS has blocked the withdraw command due to an Activity Control Unit disagreement.
- C. The RSCS did not inhibit the Continuous Withdraw function of the RMCS.
- D. The RBM is enforcing the Banked Position Withdraw Sequence.

ANSWER: C

QUESTION TYPE: RO

KA # & KA VALUE: 201004K3.01 3.3/3.4 10CFR55.41

REFERENCE: 82-RSY-0700-T1 page 17

SOURCE: **NEW QUESTION** – RO T2, GP2, #1

LO: 5812

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the RWM would not apply a block until the rod is pulled past its withdraw limit and becomes a withdraw error. B is incorrect because if this were the case, a rod block would be annunciated on P603 (A also causes annunciation). D is incorrect because the RBM does not enforce the BPWS. The RBM also is not in effect until 30% power. C is correct. The RSCS inhibits the Continuous Withdraw function of the RMCS when in the range from 75% rod density (RSCS group 3) to the LPSP at 20% power.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 121

EXAM KEY

10/23/2000

EX00121

A plant startup is underway. The following conditions exist:

APRM A, E, D	11%
APRM C and B	13%
APRM F	out of service – bypassed
IRM indications	25 to 35 on R10 for A, C, E, B, F, and H
IRM G	out of service – bypassed
IRM D	41 R10
Reactor pressure	819 psig

Which ONE of the following is the correct decision concerning these conditions?

- A. Do not place the Mode Switch in RUN, a scram will occur from APRM C and D.
- B. Do not place the Mode Switch in RUN, an MSL isolation will occur.
- C. Place the Mode Switch in RUN, a mode change to RUN is allowed with at least 2 APRMs per trip system above 5%.
- D. Place the Mode Switch in RUN, a mode change to RUN is allowed with at least 3 IRMs per trip system LE 40 on R10

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 2.2.2 4.0/3.5 10CFR55.45

REFERENCE: PPM 3.1.2 rev 51, page 38 **WNP-2 LER 84-108**

SOURCE: **NEW QUESTION – RO T3, #5 WNP-2 LER 84-108**

LO: NO LO

RATING: H2

ATTACHMENT: YES - PPM 3.1.2 rev 51, pages 37 + 38

JUSTIFICATION: C and D are incorrect because the MS to run causes a full isolation and RX Scram. A is incorrect because the APRM scram setpoint is 15% with the MS in STARTUP. B is correct because MSL pressure of less than 831 psig in RUN causes a full MSIV isolation and reactor scram.

WNP-2 WRITTEN EXAMINATION

QUESTION # 122

EXAM KEY

10/23/2000

Ex00122

A piece of equipment in a high rad area has to be isolated for maintenance. A pre-job brief is being held to discuss coordination of Operations, Maintenance, and Health Physics prior to actual work beginning.

Which ONE of the following is the person responsible for ensuring attendance at the pre-job brief?

- A. Each individual involved.
- B. The Work Team Supervisor.
- C. The Shift Support Supervisor.
- D. Health Physics Craft Supervisor

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 2.3.2 2.5/2.9 10CFR55.41, 43

REFERENCE: PPM GEN-RPP-01 rev2, page 15 and 16

SOURCE: **NEW QUESTION** – RO T3, #10

LO: NO LO

RATING: L2

ATTACHMENT: NONE

JUSTIFICATION: The ALARA program description specifies that each individual involved in the project is responsible for attendance at pre-job briefs and meetings. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 123

EXAM KEY

10/23/2000

EX00123

The plant is operating at 98% power with RHR-P-2B in operation in Suppression Pool Cooling at 7000 gpm. A transient occurs causing a reactor scram. Following the transient, RHR-P-2A remains in operation with the Minimum Flow Valve, RHR-FCV-64A open, but no flow indicated on through RHR-A. All systems operated as designed.

Which ONE of the following transients is the cause of these indications?

- A. MSIV Isolation.
- B. Loss of Feedwater.
- C. DBA LOCA
- D. Small steam leak in the drywell.

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 219000A4.07 3.5/3.4 10CFR55.41

REFERENCE: 82-RSY-1300-T3 pages 18 and 23

SOURCE: **NEW QUESTION** – RO T2, GP2, #9

LO: 5781

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A and B are both incorrect because water level would not decrease to –129 inches and cause the closure of RHR-V-24B from a LPCI signal. C is incorrect because the DBA LOCA would not only cause the auto closure of RHR-V-24B, it would allow the pump to inject when pressure decreased to less than 220 psig. D is correct because it would cause the 24 valve to close from the high drywell pressure, but would not allow the pump to inject because reactor pressure would remain high. Because the flow indicator is located downstream from the min flow line, there would be no flow indicated even with the min flow open

COMMENTS:

EX00124

WNP-2 WRITTEN EXAMINATION

QUESTION # 124

EXAM KEY

10/23/2000

The plant is operating at 92% power when a crack opens around a penetration into the main condenser. Vacuum is decreasing and is now 22 inches of HG or 8 inches of backpressure. Vacuum continues to decrease.

Which ONE of the following is correct for the current conditions?

Immediately ...

- A. reduce turbine load to bring vacuum within allowable limits.
- B. start the second air ejector.
- C. manually scram the reactor.
- D. start both mechanical vacuum pumps.

ANSWER: C

QUESTION TYPE: RO

KA # & KA VALUE: 245000K5.02 2.8/3.1 10CFR55.41

REFERENCE: PPM 4.6.5.1 rev 10 page 3

SOURCE: **NEW QUESTION** – RO T2, GP2, #13

LO: 6785

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: The direction is given in PPM 4.6.5.1 to scram the reactor and trip the turbine if vacuum approaches the turbine trip setpoint. The backpressure has already exceeded recommended limits so neither load reduction nor starting a second air ejector is allowed.. A and B are incorrect. Mechanical vacuum pumps are not allowed in operation at power levels greater than 5%, D is incorrect. C is the correct response.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 125

EXAM KEY

10/23/2000

EX00125

The plant is operating at 99% power. FPC-DM-1A is in service and is slowly plugging.

Assuming no operator action, which ONE of the following describes the FPC response?

- A. FPC-FCV-1 Demin Bypass opens to maintain 575 gpm flow through the demineralizer. If ΔP is GE 50 psid, FPC-FCV-15A Demin Outlet fully opens.
- B. FPC-FCV-15A Demin Outlet opens to maintain 575 gpm flow through the demineralizer. If ΔP is GE 50 psid, FPC-FCV-1 Demin Bypass opens.
- C. FPC-V-175 Demin Bypass opens fully when FPC Demineralizer ΔP exceeds 50 psid.
- D. FPC-V-172 HX Discharge to Demin opens fully when FPC Demineralizer ΔP exceeds 50 psid.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 233000A1.06 2.5/2.4 10CFR55.41

REFERENCE: LO000202 page 8 and 9

SOURCE: **BANK QUESTION #1022 – MODIFIED – RO T2, GP3, #2**

LO: 5367

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: The FPC system operates on a constant flow of 575 gpm through the demin. This is controlled by FPC-FCV-15A/B. If dp increases to 50 psid, FPC-FCV-1 starts to open and is full open when dp is 65 psid for GT 25 seconds. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 126

EXAM KEY

10/23/2000

EX00126

The plant is operating at 99% power. A leak in the Nitrogen Supply Header has forced the operators to manually close CN-V-65 (CIA Crosstie).

Which ONE of the following describes the effect on the SRVs?

Non ADS SRVs can be operated ...

- A. twice.
- B. once.
- C. four times.
- D. three times.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 239002K1.05 3.1/3.3 10CFR55.41

REFERENCE: 82-RSY-0100-T4 page 7

SOURCE: **BANK QUESTION – 98 EXAM #EX98042 – MODIFIED – RO T2, GP1, #21**

LO: 7748

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: Closing CN-V-65 causes a loss of air to the C solenoids on all SRVs. Non ADS SRVs have only the accumulator for the C solenoid. With CN-V-65 closed, there is enough energy for only one operation of the SRV with reactor pressure at 1000 psid. B is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 127

EXAM KEY

10/23/2000

EX00127

The plant scrammed from an MSIV isolation 10 minutes ago. RCIC is in automatic maintaining level at +35 inches, when DP-S1-1A trips.

Which ONE of the following describes the effect on RCIC operation?

- A. RCIC continues to operate, flow cannot be changed from the control room.
- B. RCIC continues to operate, flow can be changed manually by throttling RCIC-V-1.
- C. RCIC trips from a mechanical overspeed due to the bias set into the EGR controller.
- D. RCIC trips when the steam supply valve, RCIC-V-8 closes on loss of power.

ANSWER: C

QUESTION TYPE: RO

KA # & KA VALUE: 217000K2.03 2.7/2.8 10CFR55.41

REFERENCE: 82-RSY-1100-T5 page 17, and PPM 4.7.8.1A rev 0, page 5

SOURCE: **NEW QUESTION** – RO T2, GP1, #14

LO: 7652

RATING: H3

ATTACHMENT: NONE

JUSTIFICATION: A and B are both incorrect because RCIC trips from the loss of DP-S1-1A. D is incorrect because a loss of control signal to RCIC-V-1 is not a turbine trip. C is correct because the loss of DC causes a mechanical overspeed.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 128

EXAM KEY

10/23/2000

EX00128

The plant was operating at 100% power when a transient occurred. The following conditions exist:

Reactor Pressure	1021 and up slow
CN-V-65	Closed
DP-S1-1A	Tripped off.

Which ONE of the following is correct for pressure control?

Control SRVs from ...

- A. P631 Div 2, only
- B. P628 Div 1, only
- C. P601, P631 Div 2, or P628 Div 1
- D. P628 Div 1 or P631 Div 2

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 218000K6.04 3.6/3.7 10CFR55.41

REFERENCE: 82-RSY-0100-T4 page 7

SOURCE: **NEW QUESTION** – RO T2, GP1, #16

LO: 5528

RATING: H4

ATTACHMENT: NONE

JUSTIFICATION: The loss of CN due to the closure of CN-V-65 would cause control of the SRVs to be limited to the ADS SRVs on P628 and P631. The loss of DP-S1-1A in addition to the loss of control air limits the SRV operation to the Div 2 ADS SRVs on P631. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 129

EXAM KEY

10/23/2000

EX00129

The plant is operating at 99% power when the HP HEATER 6A LEVEL HI TRIP annunciator illuminates.

Which ONE of the following is correct concerning this condition?

- A. BS-V-7A Non Return Valve and BS-DV-6A open and dump steam to the MSR 2nd Stage Reheater
BS-V-6A MO Steam Supply closes
- B. BS-V-7A Non Return Valve and BS-DV-6A open and dump steam to the condenser
BS-V-6A MO Steam Supply closes
- C. BS-V-6A MO Steam Supply and BS-V-7A Non Return Valve close
BS-DV-6A opens and dumps steam to the MSR 2nd Stage Reheater.
- D. BS-V-6A MO Steam Supply and BS-V-7A Non Return Valve close
BS-DV-6A opens and dumps steam to the condenser.

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 259001K4.02 2.8/2.9 10CFR55.41

REFERENCE: 82-RSY-0700-T4 page 8

SOURCE: **NEW QUESTION** – RO T2, GP1, #24

LO: 5126

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: A heater high level trip causes the steam supply (BS-V-6A) and the non-return valve (BS-V-7A) to close. The same signal causes the dump valve (BS-DV-6A) to open and bleed energy contained in the BS line to the condenser. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 130

EXAM KEY

10/23/2000

EX00130

The Waste Demineralizer, EDR-DM-9 has been backwashed into the Waste Sludge Phase Separator Tank, FDR-TK-22. A leak in the tank is allowing spent resin to drain onto the floor of the 437 feet elevation of the Radwaste Building. ARM-RIS-29 indicates 350 mR/hr.

Which ONE of the following is correct for these conditions?

- A. Immediately start FDR-P-36, Waste Decant Pump, and pump the contents of FDR-TK-22 to the Waste Collector Tank.
- B. Verify the alarm by an alternate method if possible and direct all personnel to leave the area.
- C. Announce a Radwaste Building Evacuation and stop all RW HVAC fans.
- D. Immediately start FDR-P-23, Waste Sludge Discharge Mixing Pump, and pump the contents of FDR-TK-22 to the Waste Collector Tank.

ANSWER: B

QUESTION TYPE: RO

KA # & KA VALUE: 268000A2.01 2.9/3.5 10CFR55.41

REFERENCE: PPM 4.12.2.2 rev 9, page2, PPM 4.602.A5.5-1 rev 12, page 38

SOURCE: **NEW QUESTION** – RO T2, GP3, #4

LO: NO LO

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: A is incorrect because the action is incorrect and FDR-P-36 cannot pump to FDR-TK-22. C is incorrect because an evacuation would not be directed w/o verification of the alarm and RW HVAC should operate to provide an elevated and monitored release. D is incorrect for the same reason as A. B lists actions given by the abnormal for high area rad and is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 131

EXAM KEY

10/23/2000

EX00131

The plant was operating at 99% power when a loss of feedwater occurred. Reactor level has been returned to normal with HPCS. The CRS is giving a brief, when CRO3 notes Suppression Pool level is +3 inches and up slow.

Which ONE of the following is correct for these conditions?

CRO3...

- A. and CRO1 should coordinate and lower Suppression Pool Level following the brief.
- B. should ensure the HPCS suction from the CSTs is open while the brief is in progress.
- C. should interrupt the CRS to announce an EOP entry condition on Suppression Pool Level.
- D. should immediately trip HPCS and start RCIC for Reactor level control.

ANSWER: C

QUESTION TYPE: RO

KA # & KA VALUE: 2.4.15 3.0/3.5 10CFR55.41

REFERENCE: PPM 1.3.1 rev 46, page 35

SOURCE: **NEW QUESTION** – RO T3, #11

LO: 6079

RATING: H2

ATTACHMENT: NONE

JUSTIFICATION: When CRO3 notices Suppression Pool level of +3 inches, he should immediately interrupt the CRS to announce the new entry condition to PPM 5.2.1. C is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 132

EXAM KEY

10/23/2000

EX00132

The plant is in MODE 3 and the CRS has directed you to flush RHR to Radwaste in preparation for starting Shutdown Cooling per PPM 2.4.2.

Which ONE of the following is correct for this condition?

RHR can be flushed to ...

- A. EDR-TK-2, Waste Collector Tank, but HP must be notified to survey the area.
- B. EDR-TK-5, Waste Surge Tank, after the area has been evacuated.
- C. EDR-TK-2, Waste Collector Tank, after the area has been evacuated.
- D. EDR-TK-5, Waste Surge Tank, but HP must be notified to survey the area.

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 2.3.10 2.9/3.3 10CFR55.43

REFERENCE: PPM 2.4.2 rev 43, page 53 82-RSY-0200-T6 page 2 and figure 1

SOURCE: **NEW QUESTION** – RO T3, #9

LO: 7728

RATING: H2

ATTACHMENT: N/A

JUSTIFICATION: Flush water from RHR can be sent to either EDR-TK-2 or 5. It is not required to evacuate the area around Tank 5, nor is it required to survey/evacuate the area around Tank 2. The only requirement is to notify HP and survey the area around Tank 2 because it is not behind the shield wall. D is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 133

EXAM KEY

10/23/2000

EX00133

The reactor is in MODE 2 at 10% power with control rod withdrawal underway when the RWM Program aborts.

According to plant procedures, which ONE of the following is correct for these conditions?

- A. Stop all control rod movement except by manual scram.
- B. Rod motion may continue as long as the RSCS is operable.
- C. A second licensed operator is required to manually verify all rod movement prior to the actual movement of the control rod.
- D. The STA or other qualified member of the plant Tech Staff is required to verify rod movement prior to the actual movement of the control rod.

ANSWER: A

QUESTION TYPE: RO

KA # & KA VALUE: 2.4.11 3.4/3.6 10CFR55.41, 43

REFERENCE: ABN-RWM rev 0, page 2

SOURCE: **NEW QUESTION** – RO T3, #12

LO: 6717

RATING: L3

ATTACHMENT: NONE

JUSTIFICATION: With the loss of the RWM program, the RWM is inop. ABN-RWM only allows rod motion by manual scram with the RWM inop and in the constraints of the LPSP. A is correct.

COMMENTS:

WNP-2 WRITTEN EXAMINATION

QUESTION # 134

EXAM KEY

10/23/2000

EX00134

A control rod withdrawal is underway for a reactor startup. The CRO selects control rod 30-31 for withdrawal from notch 10 to 12 and verifies it is the correct rod in sequence, with no rod blocks. The CRO momentarily pushes the Withdraw Pushbutton and notes the following indications on P603:

- The RMCS Withdraw indicating Light illuminates and then extinguishes.
- The RMCS Settle indicating Light illuminates and then extinguishes.
- The RMCS Insert indicating Light does not illuminate.
- Control Rod 30-31 remains at notch 10

Based on the above indications, which ONE of the following failures caused 30-31 to remain at position 10?

- A. The rod motion sequence timer has malfunctioned, causing the insert valve (123) to remain closed.
- B. The rod motion sequence timer has malfunctioned, causing the withdraw valve (122) to remain closed.
- C. The under piston exhaust valve (120) failed open.
- D. The over piston exhaust valve (121) failed open.

ANSWER: A

QUESTION TYPE:	RO
KA # & KA VALUE:	201002A2.01 2.7/2.8 10CFR55.41
REFERENCE:	LO000148 page10
SOURCE:	NEW QUESTION - RO T2, GP1, #26
LO:	5792, 5799
RATING:	H3
ATTACHMENT:	NONE
JUSTIFICATION:	C & D are both incorrect because the failure of these valves in the open direction would not inhibit the requested motion. B is incorrect because the withdraw valve did open as indicated. A is correct because the insert valve did not open to allow the collet fingers to spread, which prevents the index tube from withdrawing the control rod.

WNP-2 WRITTEN EXAMINATION

QUESTION # 135

EXAM KEY

10/23/2000

EX00135

The plant is operating at 98% power. At 1500 Wednesday, RHR-P-2C is declared inoperable due to a motor failure. At 1900 Wednesday, DG-1 and all systems supported by the diesel are declared inop.

Which ONE of the following is correct concerning these conditions?

- A. Restore RHR-P-2C to operable status in 7 days from 1500 Wednesday.
- B. Restore DG-1 to operable status by 1900 Thursday.
- C. Perform SR 3.8.1.1 for OPERABLE offsite circuits by 2000 Wednesday, and restore DG-1 to OPERABLE status by 0700 Saturday.
- D. Take action within 1 hour (from 1900 Wednesday) to place the unit in MODE 2 within 7 hours, MODE 3 within 13 hours and MODE 4 within 37 hours.

ANSWER: D

QUESTION TYPE: RO

KA # & KA VALUE: 2.2.23 2.6/3.8 10CFR55.43

REFERENCE: TS. 3.0.3, 3.5.1, 3.8.1, 3.8.3

SOURCE: **NEW QUESTION** – RO, T3, #4

LO: 9540

RATING: H4

ATTACHMENT: YES - TS. 3.0.3, 3.5.1, 3.8.1, 3.8.3

JUSTIFICATION: When DG-1 and all of its supported systems are declared inop, 3 ECCS Systems are out of service and require entry into TS 3.0.3. D is correct.

COMMENTS: This question replaces EX00098 on the RO Exam as number 67