

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

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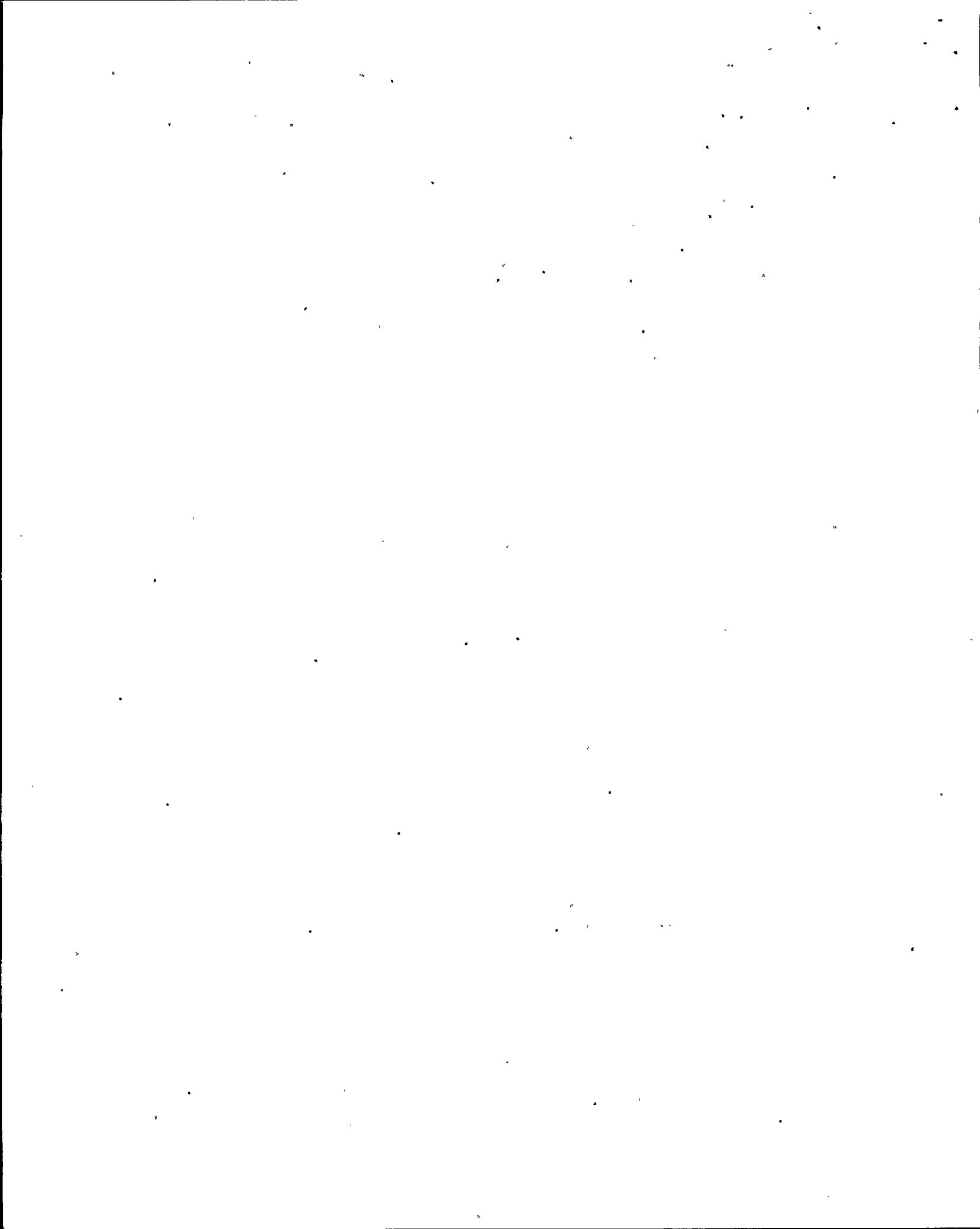
LICENSEE: Niagara Mohawk Power Corporation

FACILITY: Nine Mile Point Nuclear Station, Unit 2
Syracuse, New York 13212

DATES: June 6, 1997

CHIEF EXAMINER: D. Florek, Sr. Operations Engineer

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Division of Reactor Safety



EXAMINATION SUMMARY

Operations:

An initial written retake examinations was administered to one reactor operator (RO) applicant on June 6, 1997, at the Nine Mile Point Nuclear Station, Unit 2. The applicant passed the retake examination.

The administered examination met NRC expectations for a quality examination. However, some reasonably significant revisions were required to incorporate NRC staff comments to obtain the NRC expected examination quality. The areas in which the NMP-2 staff experienced difficulty included the examination outline, question construction, and level of difficulty.

Report Details

I. Operations

O5 Operator Training and Qualifications

O5.1 Operator Initial Examinations

a. Scope

An initial retake examination was administered to one reactor operator applicant on June 6, 1997. The examination was administered in accordance with the pilot process described in GL 95-06 and NUREG-1021, "Examiner Standards," Revision 7.

b. Examination Results

The results of the examinations are summarized below:

	RO Pass/Fail
Written	1/0
Operating	Waived
Overall	1/0

The NMP-2 initial examination outline was submitted on February 20, 1997. The examination outline was deficient in that it overemphasized knowledge areas. The NMP-2 training staff provided a revised examination outline that better addressed all of the knowledges, and abilities (KAs).

The NMP-2 initial written examination was submitted on April 7, 1997. Several problems were noted with the written examination. These included poorly structured questions, distractors not plausible, duplicate question areas, series of true/false question statements, simplistic questions, question topic not linked to the assigned KA, window dressing in stem, distractors not consistent with the area of the stem of the question and imbalance in wording of the distractors and correct answer.

A revised initial written examination was submitted on May 20, 1997 which corrected the majority of the problems. This submittal required some additional modification. The NMP-2 staff provided prompt revision which resulted in the final version of the examination. A copy of the final examination is attached.

The NMP-2 training staff administered the written examination on June 6, 1997 and submitted the graded examination to the NRC. The NRC reviewed the grading of the written examination and concluded that the NMP-2 grading was correct. A license was subsequently issued for the applicant who passed.

c. Conclusions

The RO applicant passed the written examination and was issued a license. The NMP-2 staff developed the written examination. The administered examination met NRC expectations for a quality examination. However, some reasonably significant revisions were needed to incorporate NRC staff comments to obtain the NRC expected examination quality. The areas that the NMP-2 staff experienced difficulty included the examination outline, question construction, and level of difficulty.

Attachment: RO Written examination and answer key

ATTACHMENT 1
RO EXAMINATION AND ANSWER KEY

Question: 001 (1.0 Point)

While performing a HPCS system lineup check the AO finds that CSH*MOV101 (PUMP SUCT FROM CNDS TK) local Limitorque position indicator does not indicate fully closed.

To verify position, he overrides the motor (declutch) to close the valve.

After manually seating the valve to the rim pull value stamped on the handwheel, he notes the problem on the lineup sheet to document the actions taken.

WHICH ONE (1) of the following describes the AO's actions and current valve operability status?

- a. The actions taken by the AO are in accordance with plant procedures. The valve is OPERABLE.
- b. The actions taken by the AO are in accordance with plant procedures. The valve must be declared INOPERABLE.
- c. The actions taken by the AO are not in accordance with plant procedures. The valve is OPERABLE.
- d. The actions taken by the AO are not in accordance with plant procedures. The valve must be declared INOPERABLE.

CORRECT ANSWER: d *
SOURCE:MOD

KI.OI Knowledge of how to conduct and verify valve lineups. 3.7

REF:

N2-VLU-01, Walkdown Order Valve Lineup and Valve Operations, 5.2.2, Motor Operated Valve Operation

O3-OPS-006-341-3-01,R0,EO-1.0

Question: 002 (1.0 Point)

WHICH ONE (1) of the following descriptions is in VIOLATION of station administrative procedures for independent verification of component/system alignments?

- a. A valve lineup is being performed that could result in an immediate threat to safe operation of the plant. Two operators verify the correct component and verify the intended action. After they both agree it is the correct component and action, the operator positions the valve.
- b. Two equipment operators leave the control room to perform a valve lineup on the "B" Core Spray System. Each equipment operator performs one-half of the total number of valves. They trade valve lineup sheets and verify each others completed valve lineup sheets.
- c. Due to an indicated ground on EJS-US3, EJS-US3 is deenergized by the CSO from the control room. Independent verification is performed by a second operator observing control room indication of the breaker.
- d. An equipment operator valves out CRD HCU 30-31 from service and independent verification is performed by the CSO in the Control Room verifying the accumulator trouble alarm on HCU 30-31 is received after he has directed the operator to valve out the HCU..

CORRECT ANSWER: d *

SOURCE:MOD

KI.OI Knowledge of how to conduct and verify valve lineups. 3.7

REF:

N2-ODP-0001

O3-OPS-006-341-3-01,R0,EO-1.0

Question: 003 (1.0 Point)

In accordance with GAP-OPS-02, "Control of Hazardous Energy and Configuration Tagging", WHICH ONE (1) of the following Unit 2 persons can authorize relocation of a markup on a piece of equipment?

- a. Station Shift Supervisor
- b. Qualified Markup Persons
- c. Chief Shift Operator
- d. Operations Manager

CORRECT ANSWER: c

SOURCE: MOD

KI.02 Knowledge of tagging and clearance procedures. 3.9

REF:

GAP-OPS-02

O3-OPS-006-343-3-01;R1,EO-Q/7.0

Question: 004 (1.0 Point)

WHICH ONE (1) of the following configuration tags would identify that adequate personnel protection is afforded for work to be performed ?

- a. Yellow Holdout
- b. Green Control Tag
- c. Blue Markup
- d. Red Markup

CORRECT ANSWER: d
SOURCE:NEW

K1.02 Knowledge of tagging and clearance procedures. 3.9

REF:

GAP-OPS-02,3.10.1.b

O3-OPS-006-343-3-01,R1, EO-Q/4.0

Question: 005 (1.0 Point)

This year you have accumulated 10 REM dose to the skin. WHICH ONE (1) of the following identifies the additional amount of external dose skin exposure can you receive before you exceed the Legal Annual limit?

- a. 50 Rem
- b. 40 Rem
- c. 15 Rem
- d. 5 Rem

CORRECT ANSWER: b
SOURCE: EB

KI.03 Knowledge of 10 CFR 20 and related facility radiation control requirements. 3.3

REF:

GAP-RPP-01
RP/GET TRAINING

Question: 006 (1.0 Point)

You are directed to enter a Locked High Radiation Area to perform a valve lineup. In accordance with GAP-RPP-08, *Control of High, Locked High, and Very High Radiation Areas*, WHICH ONE (1) of the following is needed for this entry ?

- a. should have a security guard to control access.
- b. shall wear Class 4 Protective Clothing.
- c. should be accompanied by an RP Technician.
- d. shall have a specific RWP approved.

CORRECT ANSWER: c
SOURCE:EB

KI.03 Knowledge of 10 CFR 20 and related facility radiation control requirements. 3.3

REF:

GAP-RPP-08,3.2/3.3

O3-OPS-006-343-3-01,R1,E0-W/4.0

Question: 007 (1.0 Point)

WHICH ONE (1) of the following conditions is permitted by station contamination control procedures ?

- a. During normal rounds in the reactor building the operator enters and exits several Contaminated Areas and frisks as soon as all entries are complete.
- b. An individual working in a Contaminated Area requiring full dressout frisks for contamination prior to removal of protective clothing.
- c. During normal rounds in the turbine building the operator enters two Contaminated Areas requiring full dressout and frisks as soon as all entries are complete.
- d. An operator performing a tour of the reactor and turbine building enters two Contaminated Areas in each building. The operator frisks as soon as the last area is exited.

CORRECT ANSWER: a

SOURCE: MOD

KI.03 Knowledge of 10 CFR 20 and related facility radiation control requirements. 3.3

REF:

GAP-RR-01, 3.4.2

RP/GET TRAINING

Question: 008 (1.0 Point)

WHICH ONE (1) of the following describes the conditions necessary to waive independent verification requirements for markup application in a high radiation area?

- a. SSS can waive the verification provided a licensed reactor operator applies the markup.
- b. Controller can waive the verification provided a qualified auxiliary operator applies the markup.
- c. SSS can waive the verification provided a qualified markup person applies the markup.
- d. Radiation protection can waive the verification provided a licensed reactor operator applies the markup.

CORRECT ANSWER: a

SOURCE: NEW

K1.03 Knowledge of 10 CFR 20 and related facility radiation control requirements. 3.3

REF: ..
GAP-OPS-02

O3-OPS-006-343-3-01,R1,EO-Q/4.0

Question: 009 (1.0 Point)

WHICH ONE (1) of the following electrical safety equipment practices is correct ?

- a. Class 1 rubber gloves shall be worn when installing protective grounds on de-energized equipment
- b. Rubber gloves are required to be air tested once per day.
- c. Rubber gloves are required to be given electrical tests every two months.
- d. Class 0 rubber gloves shall be worn when removing fuses from energized circuits greater than 1,000 volts

CORRECT ANSWER: c

SOURCE: MOD

KI.07 Knowledge of safety procedures related electrical equipment. 3.3

REF:

SFT-OSH-0104, Personal Protective Equipment,3.7.4
O3-OPS-006-341-3-01,R1,EO-E/2.0

Question: 010 (1.0 Point)

WHICH ONE (1) of the following statements is applicable for entry into a high temperature area?

- a. Ice vests can be used when thawed for up to two hours.
- b. Use of respiratory equipment may permit longer stay times.
- c. Temperatures above 120 degrees F require a habitability evaluation.
- d. Personnel must have a Site Medical evaluation prior to entry.

CORRECT ANSWER: c
SOURCE:MOD

KI.08 Knowledge of safety procedures related to high temperature. 3.1

REF:

SFT-OSH-0111, Heat Stress,3.4.4

O3-OPS-006-343-3-01,R1,EO-E/2.0

Question: 011 (1.0 Point)

WHICH ONE (1) of the following evolutions would require an approved procedure to be physically present ?

- a. Special Operating Procedure Immediate Actions
- b. Actions directed by Administrative Procedures
- c. Operations activities for power changes
- d. Performing Emergency Operating Procedure support procedures

CORRECT ANSWER: c

SOURCE:NEW

294001

A1.02 Ability to execute procedural steps 4.2

REF:

NIP-PRO-01, Rev 03

O3-OPS-006-343-3-01,R1,EO-E/2.0

Question: 012 (1.0 Point)

WHICH ONE (1) of the following statements is correct concerning Permit Required Confined and Non-permit/ Enclosed spaces?

- a. Both may contain material that has the potential to engulf an entrant.
- b. Non-permit/ Enclosed spaces may have an Oxygen concentration below 19.5%, Permit Required Confined spaces may not.
- c. Permit Required Confined spaces may have gas concentrations above 10% of their explosive limits, Non-permit/ Enclosed spaces may not.
- d. Both may have an internal configuration that could trap an entrant.

CORRECT ANSWER: c

SOURCE: NEW

KI.14 Knowledge of safety procedures related to confined spaces. 3.2

REF:

SFT-OSH-0107, Rev. 03

O3-OPS-006-343-3-01,R1,EO-E/2.0

Question: 013 (1.0 Point)

WHICH ONE (1) of the following identifies a safety precaution concerning hydrogen in the Main Generator System?

- a. Use special coated non sparking carbon steel tools.
- b. Maintain the generator pressure above atmospheric pressure when the seal oil system is running.
- c. Operate the seal oil system prior to admitting hydrogen to the generator.
- d. Regenerate the Hydrogen gas dryer when the absorber turns from blue to white or pink.

CORRECT ANSWER: c

SOURCE: NEW

K1.15 Knowledge of safety procedures related to hydrogen. 3.4

REF:

N2-OP 27

O2-OPS-001-252-2-00,R2,EO-6.0

O2-OPS-001-247-2-00,R1,EO-6.0

Question: 014 (1.0 Point)

WHICH ONE (1) of the following describes the effect of a loss of power to the SDV vent and drain valve solenoids ?

- a. close to direct air to the diaphragm operated SDV vent and drain valves.
- b. open to direct air to the diaphragm operated scram inlet and outlet valves.
- c. open to exhaust air from the diaphragm operated SDV vent and drain valves.
- d. close to exhaust air from the diaphragm operated scram inlet and outlet valves.

CORRECT ANSWER: c

SOURCE:MOD

201001	K2.04	SDV Isolation Valve Solenoids	3.2
CRDH			

REF:

N2-OP-30

O2-OPS-001-212-2-00,R1,EO-5.0

Question: 015 (1.0 Point)

WHICH ONE (1) of the following describes the Backup Scram Valves normal power source and their status with a half scram inserted ?

- a. AC powered and energized.
- b. AC powered and deenergized.
- c. DC powered and energized.
- d. DC powered and deenergized.

CORRECT ANSWER: d

SOURCE: NEW

201001	K4.04	Scramming control rods with inoperative SCRAM solenoid valves (back-up SCRAM valves)	3.6
CRDH			

REF:

N2 OP 30

O2-OPS-001-212-2-00,R1,EO-3.0

Question: 016 (1.0 Point)

WHICH ONE (1) of the following effects would occur as a result of throttling closed 2RDS*PV101, CRD Drive/Cooling Water Pressure Control Valve?

- a. Decreases control rods insertion time on a scram.
- b. Increases control rod withdrawal speed.
- c. Increases cooling water flow to each CRDM.
- d. Decreases seal flow to the Recirculation Pumps.

CORRECT ANSWER: b *

SOURCE:NEW

201001 K4.08 Controlling control rod drive header press. 3.1

REF:

O2-OPS-001-201-2-01,R3,EO-3.0,4.0b

Question: 017 (1.0 Point)

The reactor is operating at 100% power. APRM Channel C is bypassed for maintenance. The APRM DOWNSCALE annunciator alarms due to APRM Channel E failing downscale. All other APRM channels are OPERABLE.

WHICH ONE (1) of the following will result from this failure ?

- a. a rod withdrawal block from RBM Channel A.
- b. a half-scam on RPS Channel A.
- c. a rod withdrawal block but not an insert block from RMCS.
- d. both a rod insertion and withdrawal block from RMCS.

CORRECT ANSWER: c *
SOURCE: MOD

201002 K1.03 Control rod block interlocks/power operation refueling 3.4
RMCS

REF:
O2-OPS-001-215-2-02,R0,EO-5.0,8.0

Question: 018 (1.0 Point)

While operating both Control Rod Drive Hydraulic pumps to raise system flow to the RPV, one of the pumps trips. WHICH ONE (1) of the following identifies the concern for immediately lowering the operating pump flowrate per OP-30, Control Rod Drive Hydraulics?

- a. RPV overfeed to the Main steamlines.
- b. Motor overload of the remaining pump.
- c. RPV thermal stratification in the bottom head.
- d. Water level instrument notching.

CORRECT ANSWER: b
SOURCE: NEW

201001	G10	Ability to explain and apply all system limits and precautions	3.9
CRDH			

REF:
N2-OP-30

O2-OPS-001-201-2-02,R1,EO-4.0c,7.0

Question: 019 (1.0 Point)

The plant is at 100% power when condenser vacuum begins to decay. The ASSS orders a rapid power reduction by throttling 2RCS*HYV17A and B, Recirc. FCV.

WHICH ONE (1) of the following is the minimum flow permitted by SOP101D, Rapid Power Reduction ?

- a. 49 mlb/hr core flow
- b. 41,800 gpm loop flow
- c. 50% core flow
- d. Flow @ 65% power on the power/flow map

CORRECT ANSWER: a

SOURCE: NEW

202002 Recirc Flow Control	K1.03	Reactor core flow	3.7
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REF:

EM-650A

N2-SOP-29

O2-OPS-001-202-2-02,R1,EO-9.0

Question: 020 (1.0 Point)

RCS Flow Control is in Loop Manual. Presently Rx power is 60% and stable. "A" RFP is running. The "B" RFP has just tripped on motor fault. WHICH ONE (1) of the following describes the expected response from the Recirc Flow control system ?

- a. HYV 17A & 17B flow control valves remain at their current positions.
- b. RCS pumps auto down shift to slow speed
- c. HYV17A & 17B flow control valves "run back", driven by the 45% limiter.
- d. Loop controller A and B lock as is due to motion inhibit

CORRECT ANSWER: a *

SOURCE: EB

202002	A2.07	Loss of Feedwater Signal Inputs	3.3
Recirc			
Flow			
Control			

REF:

02 -OPS -001-202-2-02 ,R1 ,EO-8.0

Question: 021 (1.0 Point)

WHICH ONE (1) of the following methods of adequate core cooling is permitted by EOPs' when an RHR pump is started and available for injection during execution of EOP-C3, Steam Cooling ?

- a. Core Submergence only.
- b. Steam Cooling with injection only.
- c. Steam Cooling without injection and core submergence.
- d. Steam Cooling with injection and core submergence.

CORRECT ANSWER: a *

SOURCE: NEW

203000 RHR/LPCI: K5.02
Injection Mode

Core cooling methods

3.5

REF:

N2-EOP-BASIS

O2-OPS-006-344-2-15,R0,EO-3.0

O2-OPS-006-344-2-21,R0,EO-2.0

Question: 022 (1.0 Point)

The plant is operating at 60% RX power with Low Pressure Core Spray operating in full flow test mode. The following conditions occur:

- A high drywell pressure is received
- The RX scrams
- RX water level stabilizes at 165 inches
- RX pressure is 975 psig and stable
- Turb. bypass valves are controlling pressure
- Drywell pressure is 2.3 psig.

WHICH ONE (1) of the following describes the status of the Low Pressure Core Spray system?

- a. LPCS will realign and inject into the vessel.
- b. LPCS will realign and operate on minimum flow.
- c. LPCS pump will trip.
- d. LPCS will remain in full flow test mode.

CORRECT ANSWER: b
SOURCE: EB

209001 K4.08 Automatic system initiation
LPCS

3.8

REF:
O2-OPS-001-209-2-00,R1,EO-4.0b

Question: 023 (1.0 Point)

High Pressure Core Spray was manually initiated when RPV water level was 150 inches following a scram due to a loss of all feedwater pumps. Assuming NO operator actions, and reactor pressure is maintained at 920 psig by the turbine bypass valves, WHICH ONE (1) of the following describes the expected response of 2CSH*P1 injection valve?

- a. 2CSH*P1 injection valve will close at 202.3 inches and remain closed until manually reset at P601.
- b. 2CSH*P1 injection valve cycles to maintain level between 108.8 and 202.3 inches automatically.
- c. 2CSH*P1 injection valve cycles to maintain level between 159.3 and 202.3 inches automatically.
- d. 2CSH*P1 injection valve will not close at 202.3 inches and must be manually closed at 250 inches.

CORRECT ANSWER: b

SOURCE: MOD

209002 A3.01 Valve Operation: BWR 5,65
HPCS

3.3

REF:

O2-OPS-001-206-2-00,R1,EO-4.0c,9.0

Question: 024 (1.0 Point)

A plant transient has occurred which requires the injection of boron into the RPV via SLS. The operator places the SLS*P1A and SLS*P1B control switches to the START position. WHICH ONE (1) of the following is the expected response of SLS*P1A and SLS*P1B to the initiation if VEX-3B fails to fire?

- a. SLS*P1A and SLS*P1B should start and supply design flow to the RPV
- b. SLS*P1A and SLS*P1B should start and supply ½ design flow to the RPV
- c. SLS*P1A should start (SLS*P1B remains off) and supply ½ design flow to the RPV
- d. SLS*P1A should start (SLS*P1B remains off) and supply design flow to the RPV

CORRECT ANSWER: a *
SOURCE: EB

211000 A3.08 System Initiation
SLC

4.2

REF:
O2-OPS-001-211-2-00,R2,EO-4.0a,8.0

Question: 025 (1.0 Point)

The plant is in Operational Condition 1 with reactor power at 25% of rated. The following plant component/equipment status exists:

- RPS trip logic channel "A1" is de-energized for maintenance.

For the plant conditions described above, WHICH ONE (1) of the following statements would describe the initial plant/system response to a loss of power to 2NJS-US6?

- a. The reactor will not scram but the scram discharge volume will isolate upon loss of power..
- b. The reactor will scram and the scram discharge volume will not isolate until the SDV fills.
- c. The reactor will scram and the scram discharge volume will isolate upon loss of power..
- d. The reactor will not scram and the scram discharge volume will not isolate.

CORRECT ANSWER: b *
SOURCE: NEW

212000 K2.01 RPS motor generator sets
RPS

3.2

REF:
N2-OP-97, Reactor Protection System
O2-OPS-001-212-2-00,R1,EO-4.0a,5.0

Question: 026 (1.0 Point)

WHICH ONE (1) of the following describes the condition that will cause a rod withdrawal block during a reactor startup ?

- a. SRM counts fall below 100 cps with an SRM detector partially withdrawn and all IRMs' on Range 1.
- b. SRM counts fall below 100 cps with an SRM detector fully inserted and all IRMs' on Range 1.
- c. SRM counts exceed 10,000 cps on an SRM and all IRMs' on Range 3.
- d. SRM counts exceed 100 cps with an SRM detector partially withdrawn and all IRMs' on Range 3.

CORRECT ANSWER: a

SOURCE: MOD

215003 K1.02 Reactor manual control
IRM

3.6

REF:

O2-OPS-001-201-2-02,R1,EO-4.0c

Question: 027 (1.0 Point)

WHICH ONE (1) of the following statements describes the shorting links that are used in reactor protection system (RPS)?

- a. Installation of the shorting links enables a scram if any single SRM, IRM or APRM channel trips.
- b. Removal of the shorting links enable the SRM scrams in a coincidence of one-out-of-two-twice logic scheme.
- c. Installation of the shorting links enable the SRM scrams in a coincidence of one-out-of-two-twice logic scheme.
- d. Removal of the shorting links enables a scram if any single SRM, IRM or APRM channel trips.

CORRECT ANSWER: d

SOURCE: MOD

215004 K1.01 Reactor protection system
SRM

3.6

REF:

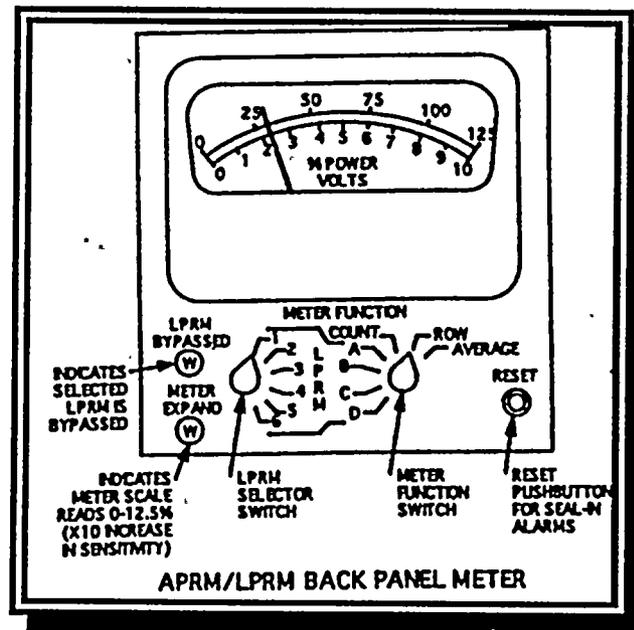
O2-OPS-001-212-2-00,R1,EO-4.0a/c

Question: 028 (1.0 Point)

A Local Power Range Monitor (LPRM) detector has been bypassed in APRM "A".

WHICH ONE (1) of the following identifies what the APRM meter would indicate in the Count position if this were the only bypassed LPRM ?

- a. 95%.
- b. 100%.
- c. 105%.
- d. 110%.



CORRECT ANSWER: b

SOURCE: NEW

215005 A4.03 APRM back panel switches, meters and ind. lights

3.2

APRM

REF:

O2-OPS-001-215-2-02,R0,EO-7.0d/e,8.0

Question: 029 (1.0 Point)

An APRM is currently indicating slightly above actual core thermal power. WHICH ONE (1) of the following identifies the initial APRM AGAF and the direction of change of the AGAF if one of the input LPRMs' to this APRM failed upscale ?

- a. less than one, lower.
- b. greater than one, greater.
- c. less than one, greater.
- d. greater than one, lower.

CORRECT ANSWER: a

SOURCE: MOD

215005	A1.07	APRM (Gain Adjustment Factor)	3.0
APRM			

REF:

O2-OPS-001-215-2-02,R0,EO-4.0

Question: 030 (1.0 Point)

WHICH ONE (1) of the following describes plant conditions for which the FUEL ZONE range level instrument will accurately indicate reactor vessel water level? (Assume reactor water level is constant in each of the following.)

- a. Operational Condition 3, RPV pressure 0 psig, and both recirculation pumps secured.
- b. Operational Condition 3, RPV pressure 0 psig, and one recirculation pump in service
- c. Operational Condition 5, refueling in progress, and one recirculation pump in service.
- d. Operational Condition 5, refueling in progress, and both recirculation pumps secured.

CORRECT ANSWER: a *
SOURCE: MOD

216000 K5.01 Vessel level measurement
NBI

3.1

REF:

O2-OPS-001-216-2-01,R2,EO-4.0d

Question: 031 (1.0 Point)

During normal full power operation with Narrow Range Level Channel "A" failed upscale the "C" channel also fails upscale. WHICH ONE (1) of the following is the expected automatic station response from this set of instrument failures ?

- a. Operating Reactor Feedwater pumps trip immediately.
- b. RCIC Turbine Trip Throttle valve will trip.
- c. Main Turbine will trip after a 4 minute time delay.
- d. High Pressure Core Spray injection valve will interlock shut.

CORRECT ANSWER: a

SOURCE: NEW

259001 A2.07 Reactor Water Level Control System Malfunction 3.7
Feedwater

REF:

O2-OPS-001-216-2-01,R2,EO-8.0

O2-OPS-001-259-2-02,R2,EO-8.0

Question: 032 (1.0 Point)

Following an automatic initiation, RCIC speed is observed to be zero, the RCIC turbine trip throttle valve (2ICS*MOV150) is open and the steam supply valve (2ICS*MOV120) is closed. WHICH ONE (1) of the following conditions could have caused this RCIC response.

- a. RCIC Pump suction low pressure
- b. RCIC Manual Isolation
- c. Low reactor pressure
- d. Reactor water level high (L8)

CORRECT ANSWER: d *
SOURCE: NEW

217000	G4	Knowledge of System Purpose and/or function	3.8
RCIC			

REF:
O2-OPS-001-217-2-00,R2,EO-4.0c

Question: 033 (1.0 Point)

The following plant conditions exist at T = 0:

- Reactor water level 10 inches
- Reactor pressure 900 psig
- Drywell pressure 1.2 psig
- RHR "B" pump is running
- All of the MSIV's closed

WHICH ONE (1) of the following describes ADS automatic initiation at T=105 seconds?

- a. No valves will open.
- b. Three valves will open.
- c. Four valves will open.
- d. Seven valves will open.

CORRECT ANSWER: ^{of unit} d

SOURCE: NEW

218000 K5.01 ADS logic operation
ADS

3.8

REF:
N2-OP-34

O2-OPS-001-218-2-01,R1,EO-4.0c

ANSWER KEY IDENTIFIED
INCORRECT ANSWER
SEVEN VALVES WOULD OPEN
FROM EITHER DIVISION
Bull
4/1/97

Question: 034 (1.0 Point)

While operating at rated power a steam leak in the drywell occurs, the drywell pressure rises to approximately 6 psig before the suppression chamber pressure begins to rise. WHICH ONE (1) of the following identifies the reason for this pressure response ?

- a. the drywell to suppression chamber vacuum breakers have cycled.
- b. drywell downcomer debris plugging has occurred.
- c. drywell pressure has overcome downcomer submergence.
- d. the drywell to suppression chamber vacuum breakers have stuck closed.

CORRECT ANSWER: c

SOURCE:NEW

REF:

N2-EOP-PCC

O2-OPS-006-344-2-21,R0,EO-2.0

223001

A3.06

Drywell/suppression chamber differential pressure:

3.4

Primary

Mark I,II

Containment

Question: 035 (1.0 Point)

During shutdown testing with RHR "A" in shutdown cooling a Division 1 high RPV pressure isolation signal is inadvertently generated. WHICH ONE (1) of the following describes the expected system response to this signal?

- a. "A" pump trips and both SDC suction isolation valves (MOV 112/113) close.
- b. "A" pump remains running and the neither SDC suction isolation valve (MOV112/113) closes.
- c. "A" pump trips and the both SDC suction isolation valves (MOV112/113) remain open.
- d. "A" pump trips and Division I SDC suction isolation valve (MOV112) closes.

CORRECT ANSWER: a *

SOURCE: NEW

223002 K3.16 Shutdown cooling system/RHR 3.2
NSSS/PCIS

REF:

807E152TY

N2-OP-31

N2-OP-83

O2-OPS-001-223-2-02,R1,EO-8.0

Question: 037 (1.0 Point)

The generator is connected to the grid and the plant is at 20% power when the operating EHC pump trips and the backup pump will NOT start. There are no EHC oil leaks.

WHICH ONE (1) of the following describes the response of the turbine control valves and bypass valves?

- a. Control valves will remain as-is; Bypass valves will open until EHC fluid pressure is lost.
- b. Control valves will close; Bypass valves will open until EHC fluid pressure is lost.
- c. Control valves will close; Bypass valves will remain closed.
- d. Control valves will remain as-is; Bypass valves will remain closed.

CORRECT ANSWER: b *

SOURCE: NEW

241000 K3.06 Bypass valves 4.1

REF:

O2-OPS-001-248-2-00,R2,EO-4.0b,8.0

Question: 038 (1.0 Point)

The plant is operating at 100% reactor power. The following condition exists:

- "A" and "B" Reactor feed pumps are in service.
- "C" Reactor Feed Pump is in standby.

WHICH ONE (1) of the following describes the effect of a Loss of Instrument Air will have on the Feedwater System?

- a. The feedpump high pressure / high flow control valves (LV-10's) fail closed.
- b. The feedpumps will trip at L8 due to the high pressure / low flow valves (LV-55's) failing open.
- c. The standby Reactor Feed Pump will auto start.
- d. The Feedpump min. flow valves (FV-2's) will fail open.

CORRECT ANSWER: d *

SOURCE: EB

295019	AK2.03	Reactor	3.2
Partial or		feedwater	
Complete			
Loss of			
Instrument			
Air			

REF:

O2-OPS-001-259-2-01 ,R2,EO-8.0

N2-SOP-19

Question: 039 (1.0 Point)

The following conditions exist:

- The reactor feedwater level control system has malfunctioned.
- Reactor water level has risen to 210 inches and continues to rise slowly.

WHICH ONE (1) of the following identifies the reactor water level range indicator that MUST be used to determine water level under these conditions ?

- a. Fuel zone
- b. Narrow Range
- c. Upset Range
- d. Wide Range

CORRECT ANSWER: c
SOURCE: EB

259002 A1.01 Reactor water level
RWLC

3.8

REF:
O2 -OPS -001-216-2-01,R0 ,EO-5.0

Question: 040 (1.0 Point)

WHICH ONE (1) of the following signals could cause SBGT to auto start?

- a. Drywell temperature of greater than 135°F.
- b. Reactor Building Area Radiation Monitor High alarm.
- c. Low flow on the SBGT fan with it's fan in AUTO
- d. Reactor vessel water level below 108.8 inches

CORRECT ANSWER: d

SOURCE: NEW

261000 K1.01 Reactor building ventilation system
SBGT

3.4

REF:

N2-OP-61B

O2-OPS-001-261-2-01,R2,EO-4.0c,5.0

Question: 041 (1.0 Point)

2 EGS*EG1 started on undervoltage and closed into 2ENS*SWG101. Annunciator 825127, EDG 1 PROT LOCKOUT RELAY TRIP was then received. The diesel generator breaker opened and the diesel shutdown. WHICH ONE (1) of the following could cause the diesel generator breaker trip and subsequent diesel shutdown?

- a. A bus overcurrent condition.
- b. A generator differential overcurrent.
- c. A underfrequency condition on 2ENS*SWG101.
- d. A generator high jacket water temperature.

CORRECT ANSWER: b

SOURCE: EB

264000 K4.02 Emergency generator trips (emergency/LOCA) 4.0
EDG

REF:

O2-OPS-001-264-2-01,R2,EO-4.0c,8.0

Question: 042 (1.0 Point)

The scram accumulator for control rod 18-19 indicates 0 psig. Reactor pressure is 530 psig. If a scram signal is generated, WHICH ONE (1) of the following describes the scram capability for rod 18-19 ?

- a. Rod will scram with slower than normal scram times.
- b. Rod will scram with normal scram times.
- c. Rod will partially insert.
- d. Rod will not scram.

CORRECT ANSWER: a *
SOURCE: MOD

201003	K4.04	The use of either accumulator or reactor water to	3.6
CRDM		SCRAM the control rod	

REF:
O2-OPS-001-201-2-01,R3,EO-3.0,8.0
O2-OPS-001-201-2-03,R1,EO-5.0

Question: 043 (1.0 Point)

The plant is at 100% power, EOL, when a reactor scram occurs. No operator actions have been taken. Rod 22-27 was selected just prior to the scram. WHICH ONE (1) of the following identifies the expected indication on the four rod display ?

- a. Rod position is blank.
- b. Rod position indicates XX.
- c. Rod position indicates 00.
- d. Rod position indicates 48..

CORRECT ANSWER: a
SOURCE: NEW

201003 K4.05 Rod position indication
CRDM

3.2

REF:

O2-OPS-001-201-2-02,R1,EO-4.0b

Question: 044 (1.0 Point)

The plant is at 100% power. While performing the daily surveillance log it is determined that one of the non-calibrated jet pumps has separated at the slip fit .WHICH ONE (1) of the following describes the Technical Specification concern with this failure?

- a. Excessive core internals vibration during single loop operation.
- b. Increased blowdown area and reduced reflood capability during a LOCA.
- c. Excessive stress on the vessel nozzles and bottom head region during normal operation.
- d. Inaccuracy of the Fuel Zone RPV level instruments during plant transients and design basis events.

CORRECT ANSWER: b

SOURCE: NEW

202001
Recirc

A2.01

Jet pump failure: plant specific

3.4

REF:

U2 TS basis 3/4.4.1

O2-OPS-001-101-2-01,R1,EO-8.0,11.0

Question: 045 (1.0 Point)

WHICH ONE (1) of the following describes the expected RWCU system lineup as a result of a high-high Filter Demin inlet temperature ?

- a. One pump running, F/D's on hold, both containment suction isolation valves open.
- b. No pumps running, F/D's online, both containment suction isolation valves shut.
- c. One pump running, F/D's online, both containment suction isolation valves open.
- d. No pumps running, F/D's on hold, outboard containment suction isolation valve shut.

CORRECT ANSWER: d
SOURCE: NEW

204000	A2.13	Signal received which results in system isolation	3.4
RWCU			

REF:
O2-OPS-001-204-2-01,R1,EO-4.0c,8.0

Question: 046 (1.0 Point)

WHICH ONE (1) of the following identifies the functional isolation signals to the SDC suction isolation valves with shutdown cooling established at the Remote Shutdown panels ?

- a. Automatically isolate on low RPV water level only.
- b. Automatically isolate on high RPV pressure only.
- c. Automatically isolate on either low RPV water level or high RPV pressure.
- d. Will not automatically isolate on either low RPV water level or high RPV pressure.

CORRECT ANSWER: ^{sl 6/4/97} d
SOURCE: MOD

205000 K4.03 Low reactor water level:
SDC

3.8

REF:
O2-OPS-001-296-2-00,R0,EO-4.0c,9.0

ANSWER KEY IDENTIFIED
INCORRECT ANSWER
GROUP 5 ISOLATIONS ON LOW LEVEL
AND HIGH PRESSURE ARE DEFEATED
B-HH
6/9/97

Question: 047 (1.0 Point)

WHICH ONE (1) of the following describes which LPRMs input into the Rod Block Monitors (RBM)?

- a. With a rod selected that has 2 LPRM strings around it, each RBM will receive 4 LPRM inputs with 'A' & 'C' detectors inputing to RBM 'A' and 'B' & 'D' to RBM 'B'
- b. With a rod selected that has 4 LPRM strings around it, each RBM will receive 16 LPRM inputs with 'A' & 'C' detectors inputing to RBM 'A' and 'B' & 'D' to RBM 'B'
- c. With a rod selected that has 3 LPRM strings around it, each RBM will receive 6 LPRM inputs with 'A' & 'B' detectors inputing to RBM 'A' and 'C' & 'D' to RBM 'B'
- d. With a rod selected that has 3 LPRM strings around it, each RBM will receive 3 LPRM inputs with 'A' & 'C' detectors inputing to RBM 'A' and 'B' & 'D' to RBM 'B'

CORRECT ANSWER: a *

SOURCE: MOD

215002 K1.02 LPRM: BWR-3,4,5
RBM

3.2

REF: .
O2-OPS-001-215-2-02,R0,EO-3.0,4.0a

Question: 048 (1.0 Point)

WHICH ONE (1) of the following interlock conditions will allow the suppression pool cooling valve (FV -38A) to be opened during a LOCA ?

- a. the differential across the valve is <130 psig.
- b. the respective LPCI Injection Valve (MOV-24) is shut.
- c. the respective LPCI Injection valve (MOV-24) seal-in circuitry is removed.
- d. the respective LPCI Injection Valve (MOV-24) is shut and a high drywell pressure exists.

CORRECT ANSWER: b

SOURCE: NEW

219000
SP Cooling

K1.01

Suppression pool

3.8

REF:

O2-OPS-001-205-2-00,R1,EO-4.0c,9.0

Question: 049 (1.0 Point)

The normal operating procedure limits operation of the RHR system to one loop in a particular mode at a time. WHICH ONE (1) of the following identifies this procedural limitation and it's reason?

- a. One loop of RHR in SP cooling or spray at a time to prevent loss of both loops during a loss of bus power and subsequent LOCA.
- b. One loop in drywell spray at a time to prevent runout of the pump during a LOCA.
- c. One loop on minimum flow at a time to prevent loop drain down during a LOCA with a subsequent loss of bus power.
- d. Neither loop in SP spray unless in the EOP's to prevent exceeding the vacuum breaker rating during normal operation.

CORRECT ANSWER: a
SOURCE: NEW

226001	G10	Ability to explain and apply all system limits and precautions	3.1
Containment			
Spray			

REF:
N2-OP-31, RHR
O2-OPS-001-205-2-00,R1,EO-6.0

Question: 050 1.0 Point)

While operating at power a loss of 2NJS-US2 occurs resulting in a secondary containment isolation and SBT system auto start. WHICH ONE (1) of the following signals or conditions cause the isolation and SBT start signal to be generated ?

- a. LOCA signal.
- b. A low ventilation exhaust flow.
- c. Closure of the system isolation dampers.
- d. High exhaust radiation signal.

CORRECT ANSWER: b *
SOURCE: NEW

288000 K6.01 AC Electrical
Plant Vent
Systems

2.7

REF:
N2-OP- 52 section B
O2-OPS-001-288-2-03,R1,EO-5.0,8.0

Question: 051 (1.0 Point)

WHICH ONE (1) of the following conditions, in the Control Room Ventilation Radiation Monitoring System, will actuate the isolation mode of the Control Room Ventilation System ?

- a. The "A" and "C" RE-18's lose power.
- b. The "B" and "C" RE-18's trip INOP.
- c. The "D" RE-18 fails downscale, "A" RE-18 trips INOP.
- d. The "A" and "B" RE-18's trip upscale.

CORRECT ANSWER: a *

SOURCE: NEW

290003	K4.01	System Initiation/Reconfigurations.	3.1
Control Room HVAC			

REF:

O2-OPS-001-288-2-02,R0,EO-5.0

O2-OPS-001-272-2-01,R2,EO-8.0

Question: 052 (1.0 Point)

While operating at rated conditions the following plant conditions exist:

- "A" RHR running in suppression pool cooling
- 2EGS*EG1 is INOPERABLE

A plant transient occurs with a concurrent loss of both off-site power lines 5 and 6. Drywell pressure rises to 9.7 psig and the RPV depressurizes to 200 psig

WHICH ONE (1) of the following identifies the expected RHR "A" configuration as a result of this transient?

- a. Running in suppression pool cooling mode.
- b. Running and injecting.
- c. Not running
- d. Running on minimum flow

CORRECT ANSWER: c *
SOURCE: NEW

203000 K2.01 Pumps
RHR/LPCI

3.5

REF:
O2-OPS-001-205-2-00,R1,EO-5.0,8.0

Question: 053 (1.0 Point)

The following conditions exist:

- A reactor startup is in progress
- The mode switch is in STARTUP
- The main turbine is tripped.
- A valid MSIV isolation has occurred.
- The reactor did NOT scram (No ATWS conditions exists).

WHICH ONE (1) of the following was the only signal that could have generated the MSIV isolation?

- a. Low reactor water level
- b. High main steam line flow
- c. High main steam line radiation
- d. Low main steam line pressure

CORRECT ANSWER: b *
SOURCE: EB

239001 K4.04 Limits steam flow during a steam line rupture to 200% 3.4
Main Steam

REF:
O2-OPS-001-212-2-00,R1,EO-4.0c,5.0
O2-OPS-001-239-2-00,R2,EO-4.0c,5.0,8.0

Question: 054 (1.0 Point)

A plant start up is in progress. The following conditions exist:

- Reactor Power is 78%.
- Three Condensate pumps are operating.
- Two Condensate Booster pumps are operating.

WHICH ONE (1) of the following describes the response of the Condensate and Condensate Booster pumps if two of the three operating heater drain pumps trip, and condensate flow is 12,250 gpm?

- a. Condensate pumps would trip, the standby Condensate Booster pump would start.
- b. Condensate pumps would remain running, both Condensate Booster pumps would trip.
- c. Condensate pumps would remain running, the standby Condensate Booster pump would auto start.
- d. All the Condensate and Condensate Booster pumps would trip.

CORRECT ANSWER: c
SOURCE: EB

256000
Reactor
Condensate

A2.01

Pump Trip

3.3

REF:

O2-OPS-001-256-2-01,R2 ,EO-4.0c

Question: 055 (1.0 Point)

WHICH ONE (1) of the following describes a start condition that will start the Division I and II Diesel Generators in the emergency mode but will not start the Division III Diesel Generator in the emergency mode?

- a. Loss of bus voltage on the respective electrical bus.
- b. High drywell pressure in the respective division.
- c. Local manual start at the respective DG control panel.
- d. Respective Panel 601 Divisional manual initiation pushbutton.

CORRECT ANSWER: a *

SOURCE: EB

262001	K1.01	Emergency generators (diesel/jet)	3.8
A.C.			
Electrical			
Distribution			

REF:

N2, 945E400, Sht. 4,5

N2-ARP-01, 00, Att.AN852303

N2-OP-100A, 06, Sect.B2

O2-OPS-001-264-2-02,R3,EO-4.0c,5.0,8.0

O2-OPS-001-264-2-01,R2,EO-4.0c,5.0,8.0

Question: 056 (1.0 Point)

Locally at UPS 2B, the following conditions exist:

- CB51 AC Input Breaker is closed
- CB52 Battery Input Breaker is closed
- CB2 Maintenance Supply Input Breaker is open
- S5 Manual Switch is in the UPS position
- UPS2B inverter output is supplying the loads

With all other plant electrical distribution breakers in the correct lineup, WHICH ONE (1) of the following describes the effect of depressing the REVERSE TRANSFER pushbutton for UPS2B?

- a. UPS loads remain energized and UPS 2B transfers from Normal AC to DC power supply.
- b. UPS loads de-energize momentarily while UPS 2B static switch transfers from Normal AC to Maintenance supply.
- c. UPS loads remain energized and REVERSE TRANSFER is blocked due to "Sync Loss".
- d. UPS loads de-energize and UPS 2B static switch transfers load from the inverter output to Maintenance supply

CORRECT ANSWER: d *

SOURCE: EB

262002	K4.01	Transfer from preferred power to alternate power supplies	3.1
UPS			

REF:

O2-OPS-001-262-2-03,R2 ,EO-7.0d

Question: 057 (1.0 Point)

A reactor startup is in progress, with reactor power approaching 1%, when a complete loss of 24/48 VDC Distribution Panel 300B occurs.

WHICH ONE (1) of the following describes how this condition will affect the Reactor Protection and Neutron Monitoring systems?

- a. RPS will generate a full reactor scram and SRM and IRM indications will fail downscale.
- b. RPS will generate a half scram and half of the SRM and IRM detectors will lose power.
- c. No affect on RPS but all reactor power indications will fail downscale .
- d. No affect on RPS but the IRM detectors cannot be withdrawn from the core.

CORRECT ANSWER: b *
SOURCE: EB

215003 K2.01 IRM channels/detectors

2.5

REF:
O2-OPS-001-263-2-01,R2 ,EO-5.0,8.0
N2-OP-73B, , Sect. I

Question: 058 (1.0 Point)

The plant is operating at 100% power when an Offgas High radiation signal is received. WHICH ONE (1) of the following statements describes what will happen due to this condition ?

- a. 2OFG*AOV103, "Offgas Exhaust to Main Stack Isolation" will close and will cause a loss of condenser vacuum
- b. 2ARC*MOV15A and B, "Precooler Inlet Valves," will close and will cause a loss of condenser vacuum
- c. 2OFG*LV20A/B, Condenser 1A/B Level Controller closes immediately, followed by 2OFG*AOV103, "Offgas Exhaust to Main Stack Isolation" closing and will not cause a loss of condenser vacuum
- d. 2OFG*AOV1/AOV11, "Recombiner Train Isolation valves" would isolate and will not cause a loss of condenser vacuum..

CORRECT ANSWER: a

SOURCE: EB

271000 K3.01 Condenser vacuum
Offgas

3.5

REF:

N2-SOP-17

O2-OPS-001-271-2-01,R2,EO-4.0c,5.0,8.0

Question: 059 (1.0 Point)

Work in the area of the Above refuel Floor Reactor Building ventilation radiation monitors has resulted in the loss of signals from both the A and B radiation monitor channels. WHICH ONE (1) of the following actions should the crew verify ?

- a. Reactor Building ventilation supply and exhaust dampers have isolated.
- b. Reactor Building ventilation continues to operate normally.
- c. Reactor Building ventilation recirculation damper is full open.
- d. Reactor Building ventilation Above Refuel Floor exhaust fans are running.

CORRECT ANSWER: a *
SOURCE: EB

272000	K4.03	Fail safe tripping of process radiation monitoring logic during conditions of instrument failure	3.6
Rad Monitor			

REF:
O2-OPS-001-272-2-01,R2,EO-8.0
O2-OPS-001-288-2-03,R1 ,EO-5.0

Question: 060 (1.0 Point)

WHICH ONE (1) of the following water fire suppression systems is MANUALLY initiated ?

- a. Wet sprinkler system in the RCIC pump area.
- b. Pre-action sprinkler system in the service water pump rooms.
- c. Water spray/deluge system for the station service transformer.
- d. Pre-action deluge system for the SBTG charcoal filter.

CORRECT ANSWER: d

SOURCE: MOD

286000 Fire A3.04 System Initiation
Protection
System

3.2

REF:

O2-OPS-001-286-2-01,R1,EO-4.0a

O2-OPS-001-261-2-01,R2,EO-7.0d

Question: 061 (1.0 Point)

WHICH ONE (1) of the following describes the Radwaste system concern with receiving water from RHR "B" versus RHR "A" during shutdown cooling operation ?

- a. High conductivity.
- b. High temperature.
- c. High radioactivity.
- d. High flowrate.

CORRECT ANSWER: b

SOURCE:NEW

268000 K1.09 ECCS systems
Radwaste

2.6

REF:

GAP-ALA-01

S-RAP-ALA-0102

N2-OP-(ALL),SECTION 3

RP/GET TRAINING

Question: 062 (1.0 Point)

WHICH ONE (1) of the following is a Safety Limit violation?

- a. Steam dome pressure reaches 1310 psig for a hydrostatic test during cold shutdown.
- b. MCPR reaches 1.12 during a loss of feedwater heating transient from full power.
- c. Reactor mode switch is placed in RUN with steam dome pressure at 0 psig.
- d. RPV water level momentarily drops to -10 inches during Refueling .

CORRECT ANSWER: d

SOURCE: NEW

290002 K5.07 Safety limits
Reactor
Vessel
Internals

3.9

REF:

N2-TS 2.0

O2-OPS-001-101-2-01,R1,EO-11.0

Question: 063 (1.0 Point)

The reactor is operating at 100% power when the reactor engineer reports that the minimum critical power ratio (MCPR) safety limit has been exceeded.

Technical Specifications require WHICH ONE (1) of the following actions ?

- a. No operator action since reactor pressure is greater than 785 psig and core flow is greater than 10% of rated flow.
- b. Corrective action be initiated within 15 minutes and the MCPR restored to within the limit within two hours or reduce thermal power to less than 25% of rated within the next four hours.
- c. An immediate reactor scram by placing the Reactor Mode Switch in the SHUTDOWN position.
- d. The reactor to be in HOT SHUTDOWN within two hours.

CORRECT ANSWER: d

SOURCE: NEW

290002	G5	Knowledge of limiting conditions for operations and safety limits	3.3
Reactor			
Vessel			
Internals			

REF:
N2-TS-2.0
O2-OPS-001-101-2-02,R3,EO-11.0

Question: 064 (1.0 Point)

Given the following:

- Refueling is in progress
- Mode switch in REFUEL
- Main Hoist loaded with a fuel bundle
- Refuel bridge is over the spent fuel pool

WHICH ONE (1) of the following conditions will generate a Reactor Manual Control system Rod Block?

- a. A control rod is selected from the Rod Select Matrix.
- b. The refuel bridge is moved over the core.
- c. The Mode Switch is placed in STARTUP.
- d. The Fuel Grapple control is placed in the RAISE position.

CORRECT ANSWER: b

SOURCE: MOD

234000 K1.04 Reactor manual control system: Plant-Specific 3.3
Fuel
Handling
Equipment

REF:
N2-OP39
O2-OPS-001-234-2-01,R1,EO-4.0c,5.0

Question: 065 (1.0 Point)

When the main turbine trips at power an RPS trip and Recirculation pump downshift are initiated. WHICH ONE (1) of the following thermal limits (as expressed on core periodic report) is the limiting concern for this event?

- a. MFLPD
- b. MFLCPR
- c. FPAPDR
- d. MAPRAT

CORRECT ANSWER: b *
SOURCE: NEW

295005	G7	Ability to explain and apply all system limits and precautions	3.1
Main Turbine Generator Trip			

REF:

O2-OPS-001-202-2-01,R1,EO-8.0,11.0

O2-OPS-001-101-2-02,R3,EO-11.0

Question: 066 (1.0 Point)

WHICH ONE (1) of the following explains the disparity in indicated water level when transitioning from Wide Range to the Fuel Zone level instruments during a level lowering event with the RPV at 800 psig ?

- a. Fuel Zone will be indicating higher than actual due to off calibration jet pump flow.
- b. Wide Range will be indicating higher than actual due to off calibration jet pump flow.
- c. Fuel Zone will be indicating lower than actual due to off calibration RPV pressure.
- d. Wide Range will be indicating lower than actual due to off calibration RPV pressure.

CORRECT ANSWER: c

SOURCE: NEW

295009 Low AA2.01 Rx Water Level
RPV Water
Level

3.9

REF:

O2-OPS-001-248-2-00,R2,EO-8.0

O2-REQ-004-352-2-01,R1,EO-2.3

Question: 067 (1.0 Point)

WHICH ONE (1) of the following identifies the expected steady state water level following a manual scram from rated power with no other operator actions?

- a. Level would be restored up to approximately 165 inches.
- b. Level would be restored up to approximately 185 inches.
- c. Level would be lowered to approximately 185 inches.
- d. Level would be lowered to approximately 165 inches.

CORRECT ANSWER: a
SOURCE:NEW

295006 AA1.02 Reactor water level control system
SCRAM

3.9

REF:
O2-OPS-001-259-2-02,R2,EO-3.0,4.0c

Question: 068 (1.0 Point)

While operating at 60 % power, a generator load reject occurs. WHICH ONE (1) of the following describes the condition of the Turbine Stop and Control valves in response to this event ?

- a. TSVs remain open, TCVs remain open.
- b. TSVs remain open, TCVs close.
- c. TSVs close, TCVs remain open.
- d. TSVs close, TCVs close.

CORRECT ANSWER: b *
SOURCE: MOD

295007 High AK2.01, Reactor/turbine pressure regulating system
Reactor
Préssure

3.5

REF:
O2-OPS-001-248-2-00,R2,EO-4.0b/c,8.0

Question: 069 (1.0 Point)

The plant is shutdown in Condition 4 with the Recirculation pumps marked up. If a loss of Shutdown Cooling occurs, the operator is directed to raise RPV level to 227-243 inches. WHICH ONE (1) of the following describes the purpose of this step ?

- a. To establish an alternate SDC flowpath.
- b. To increase natural circulation within the RPV.
- c. To provide sufficient NPSH to RHR pumps.
- d. To provide NPSH for recirc. pump restart.

CORRECT ANSWER: b

SOURCE: EB

295009 Low AK1.05 Natural circulation
Reactor Water
Level

3.3

REF:
N2-SOP-31
O2-OPS-001-205-2-00,R1,EO-9.0

Question: 070 (1.0 Point)

Due to a LOCA, a high drywell pressure exists. WHICH ONE (1) of the following protects against loss of the pressure suppression function of the primary containment?

- a. Maintaining suppression pool level at the Primary Containment Water Level limit.
- b. Maintaining suppression pool level below 201 inches.
- c. Not exceeding the SRV Tailpipe Level limit.
- d. Not exceeding the Heat Capacity Level limit.

CORRECT ANSWER: d

SOURCE: MOD

295030 Low EK3.01 Emergency Depressurization
Suppression
Pool Water
Level

3.8

REF:

N2-EOP-PCC,BASIS

O2-REQ-006-344-2-21,R0,EO-1.0,2.0

Question: 071 (1.0 Point)

The unit is operating at 100% power when the operator notices a decreasing feedwater temperature and increasing reactor power. In accordance N2-SOP-08, Unplanned Power Changes, WHICH ONE (1) of the following is an IMMEDIATE OPERATOR ACTION?

- a. Immediately scram the reactor.
- b. Reduce reactor power to <65%.
- c. Reduce reactor power to <90%.
- d. Manually isolate the affected heater string.

CORRECT ANSWER: c
SOURCE: MOD

295014	G10	Ability to explain and apply all system limits and precautions	4.0
Inadvertent Reactivity Addition			

REF:
N2-SOP-29
O2-OPS-001-260-2-00,R2,EO-8.0,9.0

Question: 072 (1.0 Point)

The reactor was operating at 100 percent power when a reactor scram resulted due to an inadvertent MSIV closure caused by testing. Only about one-third of the control rods fully inserted due to an undetected high water level in the Scram Discharge Volume. Reactor Power as indicated on the APRMs is 9 percent.

WHICH ONE (1) of the following actions would be most effective in inserting control rods?

- a. Manually initiate ARI by initiating the Redundant Reactivity Control system.
- b. De-energize scram solenoids by cycling the Power Source Selector Switch.
- c. Locally vent the Scram Air Header if accessible.
- d. Locally vent the overpiston area for the withdrawn rods if accessible.

CORRECT ANSWER: d *
SOURCE: MOD

295015 AK2.01 CRD hydraulics
Incomplete
SCRAM

3.8

REF:
N2-EOP-06,ATT14
O2-OPS-006-344-2-01,R0,EO-2.0

Question: 073 (1.0 Point)

WHICH ONE (1) of the following conditions would require drywell venting irrespective of off site release rate per EOP Primary Containment Control ?

- a. Suppression pool temperature exceeds the Heat Capacity Temp. Limit.
- b. Drywell pressure exceeds the Drywell Spray Initiation limit.
- c. Suppression Pool pressure exceeds 45 psig.
- d. Drywell temperature exceeds 340 degrees F.

CORRECT ANSWER: c
SOURCE: MOD

295024 High EK1.01 Drywell integrity: Plant-Specific
Drywell
Pressure

4.1

REF:
N2-EOP-PCC,BASIS
O2-OPS-006-344-2-04,R0,EO-2.0

Question: 074 (1.0 Point)

A LOCA occurred due to a steam leak in the drywell. The "B" loop of RHR was placed in drywell spray and the "A" loop was placed in suppression chamber spray.

Subsequently, the high drywell pressure signal clears. WHICH ONE (1) of the following describes the expected system status, with NO operator action?

- a. Drywell spray isolates; suppression chamber spray continues.
- b. Drywell spray continues; suppression chamber spray isolates.
- c. Drywell and suppression chamber sprays isolate.
- d. Drywell and suppression chamber sprays continue.

CORRECT ANSWER: b

SOURCE: MOD

295024 High EA2.09 Suppression chamber pressure: Plant-Specific
Drywell
Pressure

3.9

REF:

N2-EOP-PCC,BASIS

O2-OPS-001-205-2-00,R1,EO-4.0c,9.0

Question: 075 (1.0 Point)

An EHC malfunction at rated power results in a rising RPV pressure. WHICH ONE (1) of the following describes the first SRV relief mode setpoint that would be reached and the number of valves responding at this value?

- a. At 1103 psig two SRVs would open.
- b. At 1103 psig four SRVs would open.
- c. At 1165 psig two SRVs would open.
- d. At 1165 psig four SRVs would open.

CORRECT ANSWER: a.
SOURCE: NEW

295025 EA1.03 Safety Relief Valves: Plant Specific
High Reactor
Pressure

4.4

REF:
N2-TS-2.0,RPS SETPOINTS
O2-OPS-001-101-2-01,R1,EO-11.0

Question: 076 (1.0 Point)

EOP-C1 "Alternate Level Control", has been entered. RPV level has dropped to below TAF. The procedure requires emergency depressurization. WHICH ONE (1) of the following is the reason for emergency depressurizing?

- a. To maximize injection to regain submergence core cooling.
- b. To increase steam flow to remove all decay heat to cool the core.
- c. To ensure depressurization is completed while still within design limits.
- d. To allow establishing of the Minimum Alternate Flooding Pressure to cool the core.

CORRECT ANSWER: a

SOURCE: MOD

295031 Reactor EK3.05 Emergency Depressurization
Low Water
Level

4.2

REF:

N2-EOP-C1,BASIS

O2-OPS-006-344-2-13,R0,EO-3.0

Question: 077 (1.0 Point)

While combating an ATWS, certain plant conditions require that injection to the RPV be terminated and RPV level lowered.

WHICH ONE (1) of the following most accurately describes the reason for this step ?

- a. To provide for concentration of boron.
- b. To reduce natural circulation driving head and core flow.
- c. To add negative reactivity due to Moderator coefficient.
- d. To raise the temperature and density of the moderator.

CORRECT ANSWER: b

SOURCE: MOD

295037 EK3.03 Lowering Reactor water level.
ATWAS

4.1

REF:
N2-EOP-C5,BASIS
O2-OPS-006-344-2-17,R0,EO-3.0

Question: 078 (1.0 Point)

The plant is operating at 80% thermal power, 100% rod line when "A" Reactor Recirc Pump trips. Reactor power stabilizes at 59% and core flow at 41%.

The ASSS directed the RO to drive rods to reduce power. After 10 mins of driving rods the following plant conditions exist:

Core Flow = 38.5 % Thermal Power = 55%

WHICH ONE (1) of the following identifies the next appropriate action ?

- a. Continue driving rods
- b. Post the Heightened Awareness sign
- c. Restart the idle Recirc Pump
- d. Manually scram the Reactor

CORRECT ANSWER: d *

SOURCE: MOD

295001 AK1.02 Power/flow distribution

3.3

Partial or
Complete
Loss of
Forced
Core Flow
Circulation

REF:

N2-SOP-29

O2-OPS-001-202-2-01,R1,EO-9.0

O2-OPS-001-202-2-02,R1,EO-9.0

Question: 079 (1.0 Point)

WHICH ONE (1) of the following actions is required to operate in single recirculation loop operation ?

- a. Reduce APRM flow bias scram setpoints; reduce the MCPR Safety Limit; reduce MCPR operating limits; and reduce MAPLHGR .
- b. Reduce APRM flow bias scram setpoints; increase the MCPR Safety Limit; increase MCPR operating limits; and increase MAPLHGR.
- c. Increase APRM flow bias scram setpoints; increase the MCPR Safety Limit; increase MCPR operating limits; and reduce MAPLHGR.
- d. Reduce APRM flow bias scram setpoints; increase the MCPR Safety Limit; increase MCPR operating limits; and reduce MAPLHGR.

CORRECT ANSWER: d *

SOURCE: NEW

295001 AA1.01 Recirculation System
Partial or
Complete
Loss of
Forced
Core Flow
Circulation

3.5

REF:

N2-TS-3/4.4

N2-SOP-29

O2-OPS-001-202-2-01,R1,EO-9.0,11.0

Question: 080 (1.0 Point)

The Unit was on line at 100% power when condenser vacuum began to decay. Presently, condenser vacuum is 7.5 inches Hg. The Mode switch is in SHUTDOWN. WHICH ONE (1) of the following describes the current status of the plant ?

- a. Main turbine is tripped, MSIVs are open, SRVs are controlling reactor pressure.
- b. Main turbine is on line, MSIVs are open, TCVs are controlling reactor pressure.
- c. Main turbine is tripped, MSIVs are open, BPVs are controlling reactor pressure.
- d. Main turbine is tripped, MSIVs are closed, SRVs are controlling pressure.

CORRECT ANSWER: d *
SOURCE: NEW

295002	G7	Ability to explain and apply system limits and precautions	3.2
Loss of Main Condenser Vacuum			

REF:
N2-SOP-09
O2-OPS-001-223-2-02,R1,EO-4.0c,5.0
O2-OPS-001-212-2-00,R1,EO-4.0c,5.0

Question: 089 (1.0 Point)

WHICH ONE (1) of the following identifies the expected component response in the Containment Purge system due to a spurious Division I Group 8 Isolation during containment inerting ?

- a. Containment Purge System inboard isolation AOVs would fail open, but the lines could be isolated by the outboard isolation valves.
- b. Containment Purge System inboard isolation AOV's would fail closed, but could be reopened using the Keylock LOCA overrides.
- c. Containment Purge System outboard isolations AOV's would fail closed, and could not be remotely operated.
- d. Containment Purge System outboard AOV's would fail as-is, but could be opened locally.

CORRECT ANSWER: c *

SOURCE: EB

295019 AK2.14 Plant air systems
Partial or
Complete
Loss of
Instrument
Air

3.2

REF:
N2-OP-83
N2-SOP-19
O2-OPS-001-223-2-03,R2,EO-5.0,9.0

Question: 090 (1.0 Point)

The plant is in mode 1. In accordance with N2-SOP-30, *CONTROL ROD DRIVE FAILURES*, WHICH ONE (1) of the following conditions requires the operator to manually scram the reactor during a loss of CRD pumps?

- a. Reactor pressure is 1000 psig and three accumulators are inoperable.
- b. Reactor pressure is 860 psig and charging water header pressure can not be restored within 5 min..
- c. Reactor pressure is 860 psig and two accumulators are inoperable.
- d. Reactor pressure is 800 psig and charging water header pressure can not be restored within 15 minutes.

CORRECT ANSWER: c
SOURCE:NEW

295022	G10	Ability to perform without reference to procedures those actions that require immediate operation of system components or controls	3.7
Loss of CRD Pumps			

REF:
N2-SOP-30
O2-OPS-001-201-2-01,R3,EO-8.0,9.0

Question: 097 (1.0 Point)

WHICH ONE (1) of the following identifies the concern with thermal stratification in the RPV following a loss of Shutdown Cooling ?

- a. If the RHR loop cools down the thermal shock interlock will prevent RHR pump restart.
- b. Vessel bottom head drain temperature would indicate lower temperature than actually exists.
- c. Coolant temperature indication would not identify a reactor mode change at 200 degrees F.
- d. A low temperature at the reactor recirculation pump suction would exceed the RPV cooldown limits.

CORRECT ANSWER: c

SOURCE: NEW

295021 AK1.02 Thermal stratification
Loss of
Shutdown
Cooling

3.3

REF:
N2-SOP-31
O2-OPS-002-205-2-00,R1,EO-8.0,9.0

Question: 098 (1.0 Point)

EOP-SCC, "Secondary Containment Control", requires a rapid depressurization of the RPV if the Maximum Safe Operating Temperature is exceeded for more than one area. WHICH ONE (1) of the following is the BASES for this depressurization ?

- a. Based on preventing fuel damage to prevent release of fission products into the reactor building.
- b. Based on the potential for causing equipment failures that are used during a failure to scram.
- c. Based on protecting personnel and equipment from high temperature environments.
- d. Based on the potential for fire damage to equipment, instrumentation and controls.

CORRECT ANSWER: c

SOURCE: MOD

295032 High EK3.01 Emergency/Normal Depressurization
Secondary
Containment
Area
Temperature

3.5

REF:

N2-EOP-SCC,BASIS

O2-OPS-006-344-2-08,R0,EO-2.0

Question: 087 (1.0 Point)

Following a loss of the CCP Cooling system WHICH ONE (1) of the following loads could be aligned to receive cooling from an alternate source?

- a. RHS Heat Exchangers
- b. IAS Air Compressors
- c. SFC Heat Exchangers
- d. WCS Regenerative Heat Exchangers

CORRECT ANSWER: c

SOURCE: EB

295018 AA1.02 System loads
Partial or
Complete
Loss of
Component
Cooling
Water

3.3

REF:
N2-OP-13
O2-OPS-001-208-2-00,R1,EO-4.0a,5.0,7.0

Question: 088 (1.0 Point)

WHICH ONE (1) of the following describes the expected Feedwater system response to an initiation of the Redundant Reactivity Control system (RRCS) on high RPV pressure during an ATWS ?

- a. All feedwater pumps trip and can be restarted after 25 seconds.
- b. All level control valves shift to manual and close and can be reopened after 25 seconds.
- c. The LV-10's shift to manual and can be placed back in auto after 98 seconds.
- d. The Feedwater pump minimum flow control valves open and can be reclosed by resetting RRCS after 10 minutes.

CORRECT ANSWER: b

SOURCE: NEW

295037 EK2.02 RRCS 4.0
ATWAS

REF:

N2-OP-03

O2-OPS-001-294-2-08,R1,EO-4.0c,5.0

Question: 085 (1.0 Point)

Following a control room evacuation, WHICH ONE (1) of the following is the mode of RPV water level and reactor pressure control per SOP-78 ?

- a. Feedwater pumps controlling RPV water level and turbine bypass valves controlling reactor pressure.
- b. RCIC controlling RPV water level and HPCS controlling reactor pressure.
- c. RCIC controlling RPV water level and SRVs controlling reactor pressure.
- d. HPCS controlling RPV water level and SRVs controlling reactor pressure.

CORRECT ANSWER: c

SOURCE:MOD

295016 AK2.01 Remote Shutdown Panel
Control Room
Abandonment

4.4

REF:

N2-SOP-78

O2-OPS-001-296-2-00,R0,EO-9.0

Question: 086 (1.0 Point)

NMP2-EOP-RADIOACTIVE RELEASE CONTROL, has been entered.

WHICH ONE (1) of the following is the reason that the operator is directed to ensure that the Turbine Building Ventilation fans are running?

- a. To reduce radioactive releases to the environment.
- b. To prevent radioactive releases to the environment.
- c. To provide an elevated, monitored release pathway.
- d. To provide a processed release pathway.

CORRECT ANSWER: c
SOURCE: NEW

295038 EK2.03 Plant ventilation systems
High
Off-Site
Release
Rate

3.6

REF:
N2-EOP-SCC,BASIS
O2-OPS-006-344-2-12,R0,EO-2.0

Question: 099 (1.0 Point)

During refueling, a fuel assembly is dropped and several Refueling Floor area radiation alarms annunciate. According to SOP-39, Refuel Floor Events, WHICH ONE (1) of the following correctly describes the areas that should be immediately evacuated ?

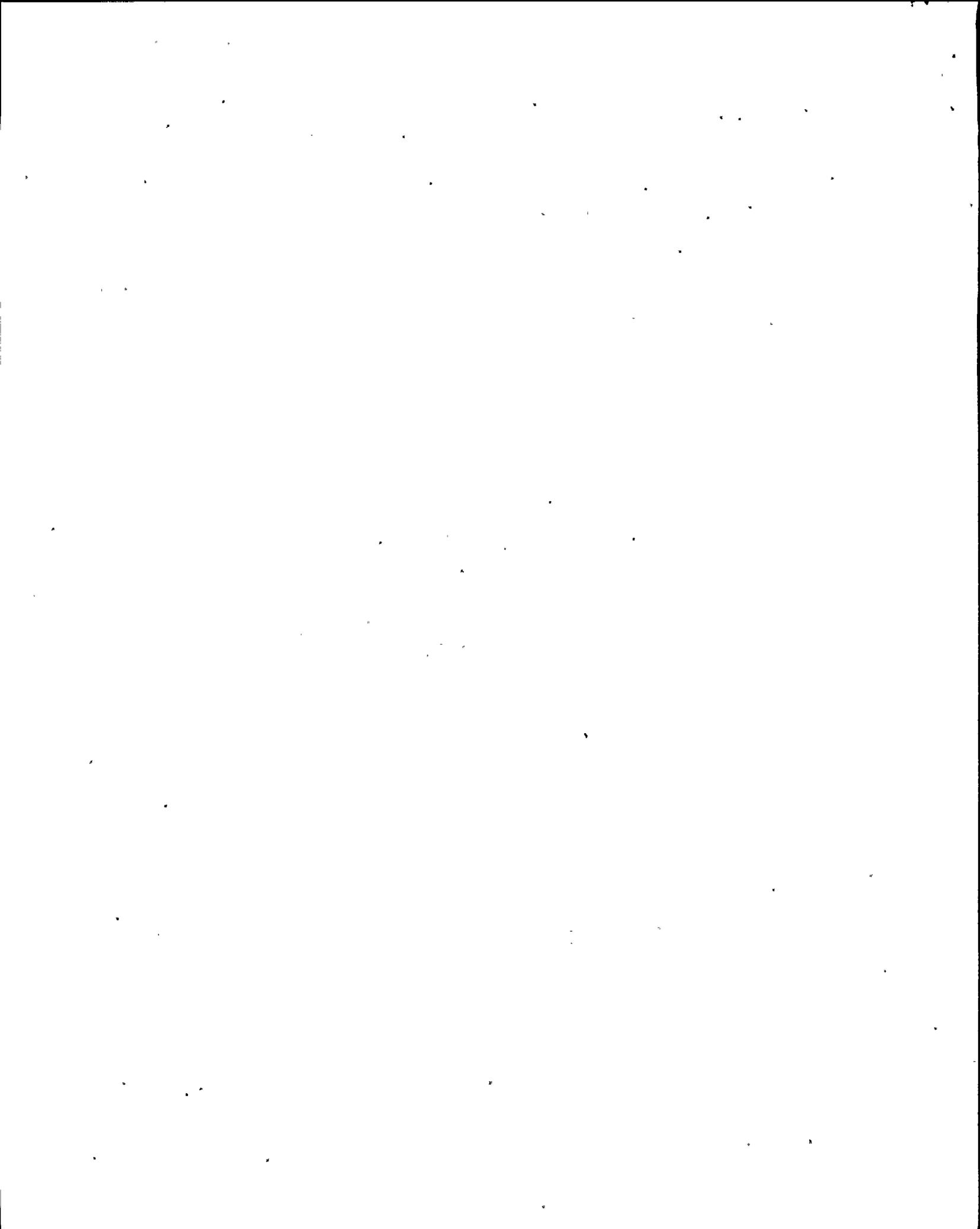
- a. Refuel Floor only.
- b. Refuel Floor and Reactor Building.
- c. Refuel Floor, Reactor Building and GTS Room.
- d. Refuel Floor and Drywell.

CORRECT ANSWER: d
SOURCE: NEW

295023 AK1.01 Radiation exposure hazards
Refueling
Accidents

3.6

REF:
N2-SOP-39
O2-OPS-001-234-2-01,R1,EO-8.0,9.0



Question: 081 (1.0 Point)

Throughout the plant, panels associated with the Station Black Out procedure are outlined with WHICH ONE (1) of the following identifiers ?

- a. 2" wide glow in the dark tape.
- b. Luminous green arrows.
- c. Labeling with Green lettering.
- d. Black and Yellow tape.

CORRECT ANSWER: a
SOURCE: NEW

295003	AK1.06	Station blackout: Plant-Specific	3.8
Partial or Complete Loss of A.C. Power			

REF:
N2-SOP-02
O2-OPS-001-262-2-01,R2,EO-9.0

Question: 082 (1.0 Point)

The plant is at 62% power, recovering from an inadvertent trip of the "B" reactor recirc pump. Shortly after the recirc pump was started and power ascension commenced, the high reactor water level alarm is received. The CSO notes that actual level is 187.3" and rising. WHICH ONE (1) of the following actions should the crew take immediately:

- a. Immediately, manually scram the reactor and trip the operating Reactor Feedwater pumps.
- b. Place the reactor vessel water level control system in manual and attempt to return water level to normal.
- c. Lower the Feedwater Master Controller setpoint to 184 inches to return level to normal.
- d. Manually scram the reactor and shut the inboard MSIVs.

CORRECT ANSWER: b *

SOURCE: New

295008	G10	Ability to perform without reference to procedures those actions that require immediate operation of system components or controls	3.8
High Reactor Water Level			

REF:

N2-SOP-06

O2-OPS-001-259-2-02,R2,EO-9.0

Question: 084 (1.0 Point)

Under the following plant conditions:

- RPV pressure 500 psig and stable
- Rx is not shutdown
- SRV s are controlling pressure
- Suppression pool level is at 198.5 ft. and lowering slowly

WHICH ONE (1) of the following Suppression Pool Water Temperature indications should be used to report suppression pool temperature?

- a. An average of the indications at elevation 197 ft.
- b. The highest of the indications at elevation 197 ft.
- c. An average of the indications at elevation 199 ft.
- d. The highest of the indications at elevation 199 ft.

CORRECT ANSWER: a
SOURCE: NEW

295013 AA2.01 Suppression Pool Temp.
High
Suppression
Pool
Temperature

3.8

REF:

O2-OPS-001-223-2-06,R2,EO-3.0
N2-TS 3.3.7.5,

Question: 083 (1.0 Point)

WHICH ONE (1) of the following is the basis for the Drywell Spray Initiation Limit Curve?

- a. Initiation of drywell sprays above the Drywell Spray Initiation Limit curve could result in failure of the primary containment due to exceeding the negative design pressure.
- b. Initiation of drywell sprays above the Drywell Spray Initiation Limit curve could result in failure of the RPV due to excessive thermal stresses caused by the cold water spray.
- c. Initiation of drywell sprays above the Drywell Spray Initiation Limit curve could result in failure of the drywell spray piping due to excessive temperature gradients.
- d. Initiation of drywell sprays above the Drywell Spray Initiation Limit curve would not result in the desired reduction in drywell temperature and no benefit would be derived from initiating the system.

CORRECT ANSWER: a
SOURCE:MOD

295012 EK3.03 Drywell spray operation: Mark I, II 3.6
High
Drywell
Temperature

REF:
N2-EOP-PCC,BASIS
O2-REQ-006-344-2-21,R0,EO-2.0

Question: 091 (1.0 Point)

WHICH ONE (1) of the following EOP conditions would require Emergency Depressurization during a failure to scram event in which EOP-C5, Power/Level Control is being executed ?

- a. Suppression pool temp. above the Heat Capacity Temperature Limit.
- b. RPV level below TAF.
- c. RPV pressure below the Minimum Alternate Flooding Pressure.
- d. Suppression pool level below the SRV Tailpipe Level Limit.

CORRECT ANSWER: a
SOURCE: NEW

295026	EK3.01	Emergency/normal depressurization	3.8
Suppression			
Pool High			
Water			
Temperature			

REF:
N2-EOP-PCC,Basis Document
O2-OPS-006-344-2-04,R0,EO-2.0

Question: 092 (1.0 Point)

WHICH ONE (1) of the following is the basis for maintaining the 49 psig pressure margin between the reactor and the suppression chamber during execution of EOP-C4, RPV Flooding ?

- a. Assures that the fuel clad temperature is below 2200 degrees F
- b. Assures that all decay heat will be removed from the reactor
- c. Assures that the required number of SRVs will remain open
- d. Assures that water will not be siphoned into the SRV tailpipes

CORRECT ANSWER: b

SOURCE: MOD

295028 EK2.03 Reactor water level indication
High
Drywell
Temperature

3.6

REF:

N2-EOP-C4,BASIS

O2-OPS-006-344-2-16,R0,EO-2.0

Question: 093 (1.0 Point)

EOP-PCC, "Primary Containment Control", directs the operator to spray the drywell only if suppression pool level is below 217 feet. WHICH ONE (1) of the following correctly describes the bases for this limit at this step ?

- a. Ensures the hydrodynamic loading capability of the SRV tailpipe and T-quencher will not be exceeded.
- b. Ensures that the suppression chamber-to-drywell vacuum breakers are not submerged.
- c. Ensures that suppression chamber sprays are still effective.
- d. Ensures the capability of the primary containment vent is no longer effective.

CORRECT ANSWER: b

SOURCE:MOD

295029 EA2.01 Suppression Pool Water Level
High
Suppression
Pool Water
Level

3.9

REF:

N2-EOP-PCC,BASIS

O2-OPS-006-344-2-04,R0,EO-2.0

Question: 094 (1.0 Point)

EOP-PCC, "Primary Containment Control" (suppression pool water level below EL 199.5 ft leg), requires a reactor scram if suppression pool level cannot be maintained above 192 feet. WHICH ONE (1) of the following is a correct statement regarding this level ?

- a. This level is the elevation of the drywell-to-suppression chamber downcomers
- b. This level is the elevation of the SRV T-quenchers.
- c. This level is the elevation of the RCIC turbine exhaust discharge line.
- d. This level is the elevation of the lowest level indicator in the pool.

CORRECT ANSWER: d
SOURCE: MOD

295030 EK3.06 Reactor Scram
Low
Suppression
Pool Water
Level

. 3.6

REF:
N2-EOP-PCC,BASIS
O2-REQ-006-344-2-21,R0,EO-2.0

Question: 095 (1.0 Point)

The plant was at rated power when a steam line break occurred in the steam tunnel. As a result, the following occurred:

- RCIC was initiated manually to restore reactor water level to the normal band.
- HPCS was also manually started but tripped on overcurrent.
- RB Ventilation (HVR) exhaust radiation level is $1 \times E-2$ uCi/ml.

For the conditions described above, WHICH ONE (1) of the following statements correctly describes the system(s) that are controlling Reactor Building atmospheric conditions ?

- a. HVR only.
- b. Both HVR and SBTG.
- c. Neither HVR or SBTG.
- d. SBTG only.

CORRECT ANSWER: d
SOURCE:MOD

295034 Secondary
Containment Vent. High
Radiation

EA2.04

Secondary Cont. Vent.

3.9

REF: .
N2-OP-52
O2-OPS-001-288-2-03,R1,EO-4.0c,5.0

Question: 096 (1.0 Point)

Emergency Recirc Unit 2HVR*UC413B has been marked up with its' power supply breaker open. WHICH ONE (1) of the following describes how the Emergency Recirc Unit 2HVR*UC413A will respond if an inadvertent secondary containment isolation is received ?

- a. Will start immediately.
- b. Will start after a 5 second time delay.
- c. Will start after a 25 second time delay.
- d. Will not start.

CORRECT ANSWER: c

SOURCE: EB

295020 AA1.01 PCIS/NSSSS

3.6

Inadvertent
Containment
Isolation

REF:

O2-OPS-001-288-2-03 ,R1,EO-4.0c,8.0