U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR LICENSING EXAMINATION REPORT

Examination Report No.:	92-14 (OL)
Facility Docket No.:	50-220
Facility License No.:	DPR-63
Licensee:	Niagara Mohawk Power Corporation Post Office Box 63, Lake Rd. Lycoming, New York 13093
Facility:	Nine Mile Point Unit 1
Examination Dates:	June 8 - 12, 1992
Examiners:	S. Hansell, Operations Engineer T. Fish, Senior Operation Engineer M. Parrish, Examiner, EG&G

Chief Examiner: _____ 7/15/92
S. Hansell, Operations Engineer — Date

Approved by: _____ 7/15/92
Richard J. Conte, Chief — Date
BWR Section, Operations Branch, DRS

EXAMINATION SUMMARY

Initial examinations were administered to one senior reactor operator (SRO) upgrade, two SRO instant, and six reactor operator (RO) candidates. All of the SRO and five of six RO applicants passed both portions of the examinations. One RO did not pass the written examination. In general, the applicants were well prepared for the examinations. It appeared that SRO level of knowledge on plant systems and their ability to predict system response as a result of component malfunctions was markedly greater than that of the RO's level of knowledge. The facility staff demonstrated considerable technical expertise and a high level of cooperation with the NRC Examiners during the examination preparation and administration.

DETAILS

1.0 INTRODUCTION

The NRC examiners administered initial examinations to one SRO upgrade, two SRO instant, and six RO applicants. The examinations were administered in accordance with NUREG 1021, Examiner Standards, Revision 6. The results of the examination are summarized below:

	SRO Pass/Fail	RO Pass/Fail
Written	3/0	5/1
Operating	3/0	6/0
Overall	3/0	5/1

2.0 PREEXAMINATION ACTIVITIES

The facility reviewed the written examinations in the facility training center on May 28, 1992. The review team included the Supervisor Operations Training, two Senior Training Instructors, and a licensed Senior Reactor Operator from the operations group. The simulator scenarios were validated May 28, 1992, on the facility's simulator. The facility staff who were involved with these reviews signed security agreements to ensure that the examination was not compromised.

3.0 EXAMINATION-RELATED FINDINGS, OBSERVATIONS AND CONCLUSIONS

The following is a summary of the strengths and weaknesses noted during examination administration. This information is being provided to aid the licensee in upgrading their training program.

3.1 Written Section

The following subjects were missed by at least half of the RO and SRO candidates, indicating a weak performance in these areas:

- Knowledge of personnel maximum stay time in a high radiation field.
- Knowledge of the Liquid Poison pump injection capabilities.

The following subjects were missed by at least half of the RO candidates, indicating a

weak performance in these areas:

- Knowledge of the recirculation pump speed control during a pump start.
- Knowledge of the emergency cooling steam isolation valve control when the remote shutdown switch is placed in the Emergency position.
- Knowledge of the method which results in the largest differential pressure across the control rod drive piston for inserting control rods.

3.2 Walk-through Section

Strengths

- The attentive response of the candidates to JPMs containing alternate success paths.

Weaknesses

- The explanation of reactor pressure response to an MSIV closure at 40% reactor power.
- The RO familiarity with the general content of technical specifications.

3.3 Simulator Section

Strengths

- The SROs' attentiveness to establishing reactor pressure and water level bands during accident conditions.
- The applicants' demonstration of teamwork and effective communications.
- The applicants' consistent use of the overhead annunciator procedures.

Weaknesses

- The ability to restore AC distribution electrical power, specifically, the restoration of the emergency diesel generators coincident with a loss of offsite power.

3.4 Other Observations

The Examiners noted that the material condition of the plant was excellent. Access into the plant and through the radiological control areas was rapid. The control room atmosphere was conducive to the conduct of the examinations.

The technical abilities of the training staff during the examination preparation and administration, especially during the simulator examinations, were a training program strength.

3.5 Conclusions

The applicants' demonstrated abilities of control room command function, teamwork, and effective communications were strengths. In general, the NRC Examiners concluded the applicants were well prepared for the examinations. The examiners noted that the SROs' detailed knowledge level of the plant was greater than that of the ROs'.

4.0 EXIT MEETING

An exit meeting was conducted June 12, 1992, following the administration of the examinations. Exit attendees are listed in Attachment 5. The facility presented their comments on the written examinations (Attachment 3). The NRC exam team discussed generic findings regarding the applicants performance and training program strengths.

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Master
"RO"
Exam

Nuclear Regulatory Commission
Operator Licensing
Examination

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date of examination.

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U. S. NUCLEAR REGULATORY COMMISSION
SITE SPECIFIC EXAMINATION
REACTOR OPERATOR LICENSE
REGION 1

CANDIDATE'S NAME: ____________________

FACILITY: Nine Mile Point 1

REACTOR TYPE: BWR-GE2

DATE ADMINISTERED: 92/06/08

INSTRUCTIONS TO CANDIDATE:

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. Points for each question are indicated in parentheses after the question. The passing grade requires a final grade of at least 80%. Examination papers will be picked up four (4) hours after the examination starts.

TEST VALUE	CANDIDATE'S SCORE	%	
98 ~~99.00~~ sul 7/1/92		%	TOTALS
	FINAL GRADE		

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

____
Candidate's Signature

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

MULTIPLE CHOICE

001 a b c d ___
002 a b c d ___
003 a b c d ___
004 a b c d ___
005 a b c d ___
006 a b c d ___
007 a b c d ___
008 a b c d ___
009 a b c d ___
010 a b c d ___
011 a b c d ___
012 a b c d ___
013 a b c d ___
014 a b c d ___
015 a b c d ___
016 a b c d ___
017 a b c d ___
018 a b c d ___

019 MATCHING

a ___
b ___
c ___
d ___

MULTIPLE CHOICE

020 a b c d ___
021 a b c d ___
022 a b c d ___
023 a b c d ___
024 a b c d ___
025 a b c d ___
026 a b c d ___
027 a b c d ___
028 a b c d ___
029 a b c d ___
030 a b c d ___
031 a b c d ___
032 a b c d ___
033 a b c d ___
034 a b c d ___
035 a b c d ___
036 a b c d ___

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

037	a	b	c	d	___	060	a	b	c	d	___
038	a	b	c	d	___	061	a	b	c	d	___
039	a	b	c	d	___	062	a	b	c	d	___
040	a	b	c	d	___	063	a	b	c	d	___
041	a	b	c	d	___	064	a	b	c	d	___
042	a	b	c	d	___	065	a	b	c	d	___
043	a	b	c	d	___	066	a	b	c	d	___
044	a	b	c	d	___	067	a	b	c	d	___
045	a	b	c	d	___	068	a	b	c	d	___
046	a	b	c	d	___	069	a	b	c	d	___
047	a	b	c	d	___	070	a	b	c	d	___
048	a	b	c	d	___	071	a	b	c	d	___
049	a	b	c	d	___	~~072~~	~~a~~	~~b~~	~~c~~	~~d~~	___ Deleted SLL 7/2/92
050	a	b	c	d	___	073	a	b	c	d	___
051	a	b	c	d	___	074	a	b	c	d	___
052	a	b	c	d	___	075	a	b	c	d	___
053	a	b	c	d	___	076	a	b	c	d	___
054	a	b	c	d	___	077	a	b	c	d	___
055	a	b	c	d	___	078	a	b	c	d	___
056	a	b	c	d	___	079	a	b	c	d	___
057	a	b	c	d	___	080	a	b	c	d	___
058	a	b	c	d	___	081	a	b	c	d	___
059	a	b	c	d	___	082	a	b	c	d	___

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

083 a b c d ___

084 a b c d ___

085 MATCHING

a ___

b ___

c ___

d ___

MULTIPLE CHOICE

086 a b c d ___

087 a b c d ___

088 a b c d ___

089 a b c d ___

090 a b c d ___

091 a b c d ___

092 a b c d ___

093 a b c d ___

094 a b c d ___

095 a b c d ___

096 a b c d ___

097 a b c d ___

(********** END OF EXAMINATION **********)

NRC RULES AND GUIDELINES FOR LICENSE EXAMINATIONS

During the administration of this examination the following rules apply:

1. Cheating on the examination means an automatic denial of your application and could result in more severe penalties.

2. After the examination has been completed, you must sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination. This must be done after you complete the examination.

3. Restroom trips are to be limited and only one applicant at a time may leave. You must avoid all contacts with anyone outside the examination room to avoid even the appearance or possibility of cheating.

4. Use black ink or dark pencil ONLY to facilitate legible reproductions.

5. Print your name in the blank provided in the upper right-hand corner of the examination cover sheet and each answer sheet.

6. Mark your answers on the answer sheet provided. USE ONLY THE PAPER PROVIDED AND DO NOT WRITE ON THE BACK SIDE OF THE PAGE.

7. Before you turn in your examination, consecutively number each answer sheet, including any additional pages inserted when writing your answers on the examination question page.

8. Use abbreviations only if they are commonly used in facility literature. Avoid using symbols such as < or > signs to avoid a simple transposition error resulting in an incorrect answer. Write it out.

9. The point value for each question is indicated in parentheses after the question.

10. Show all calculations, methods, or assumptions used to obtain an answer to any short answer questions.

11. Partial credit may be given except on multiple choice questions. Therefore, ANSWER ALL PARTS OF THE QUESTION AND DO NOT LEAVE ANY ANSWER BLANK.

12. Proportional grading will be applied. Any additional wrong information that is provided may count against you. For example, if a question is worth one point and asks for four responses, each of which is worth 0.25 points, and you give five responses, each of your responses will be worth 0.20 points. If one of your five responses is incorrect, 0.20 will be deducted and your total credit for that question will be 0.80 instead of 1.00 even though you got the four correct answers.

13. If the intent of a question is unclear, ask questions of the examiner only.

14. When turning in your examination, assemble the completed examination with examination questions, examination aids and answer sheets. In addition, turn in all scrap paper.

15. Ensure all information you wish to have evaluated as part of your answer is on your answer sheet. Scrap paper will be disposed of immediately following the examination.

16. To pass the examination, you must achieve a grade of 80% or greater.

17. There is a time limit of four (4) hours for completion of the examination.

18. When you are done and have turned in your examination, leave the examination area (EXAMINER WILL DEFINE THE AREA). If you are found in this area while the examination is still in progress, your license may be denied or revoked.

QUESTION: 001 (1.00)

Which ONE of the following will result in discharge of the reserve bank of Halon cylinders?

a. The detection system is not reset within 30 seconds after the main bank discharge is complete.

b. The detection system is not reset prior to switching to the reserve bank.

c. The detection system receives one additional initiation signal after main bank discharge is complete.

d. Initiation is performed manually at the hazard location.

QUESTION: 002 (1.00)

The following plant conditions exist:

Automatic Depressurization System (ADS) is actuated
Reactor water level: -15 inches
All Core Spray (CS) pumps: running
120 second timer: timed out
3 ADS ERVs: open
Reactor pressure: 150 psig and decreasing

WHICH ONE of the following will cause the Automatic Depressurization System ERV's to close and remain closed without further operator action?

a. BOTH ADS Timer Reset Pushbuttons are depressed and released.

b. ONE ADS inhibit switch is placed in "INHIBIT".

c. Water level is raised above -10 inches.

d. Loss of 120VAC from power board 102 & 103 .

QUESTION: 003 (1.00)

While operating at 100% power, the Main Turbine Bypass and Control Valves fail open, causing the following events:

- RPV pressure decreases to 750 psig, reactor power decreases to 50% before the MSIVs begin closing
- After the MSIVs close, RPV pressure increases to 1380 psig before ERVs decrease pressure to about 1100 psig
- Reactor power spikes to 120% on APRMs before a scram decreases power to 0%
- RPV level decreases to a low of -5 inches before operators are able to restore level to normal

Which indicate the Safety Limits that have been exceeded?

a. RPV level and neutron flux limits.

b. RPV level and MCPR limits.

c. RPV pressure and MCPR limits.

d. RPV pressure and neutron flux limits.

QUESTION: 004 (1.00)

Which ONE of the following describes a properly orientated fuel bundle?

a. Orientation boss on the handle points away from the control rod.

b. The channel spacer buttons face the control rod.

c. Serial number on the bail handle is readable looking from the outside edge of bundle in towards control rod.

d. Channel fastener is located on the outside edge 180 degrees away from fuel cell center.

QUESTION: 005 (1.00)

When fully withdrawing a control rod, an uncoupled control rod is indicated when:

a. rod position indicates 48 on the full core display and the CONTROL ROD OVER TRAVEL annunciator alarms.

b. rod position indication goes dark and the CONTROL ROD OVER TRAVEL annunciator alarms.

c. CONTROL ROD OVER TRAVEL annunciator alarms and the ROD OUT LIGHT becomes lighted.

d. rod position indication backlighting becomes RED with the rod position remaining at 48.

QUESTION: 006 (1.00)

Which ONE of the following describes the operation/configuration of the backup scram valves?

a. Two valves in series normally energized, one valve will de-energize with each RPS channel tripping. Actuation of both is required to vent the air header.

b. Two valves in series, one powered from each RPS trip channel, either valve deenergizing will vent the scram air header.

c. Two valves in series, each requires both RPS channels tripped to energize, both valves must energize to vent the air header.

d. Two valves in series, both RPS channels must trip to energize either valve, one valve must energize to vent the air header.

QUESTION: 007 (1.00)

When performing a surveillance test in a contaminated area the operator shall have a procedure stamped:

a. "for information only" and "effective".

b. "controlled".

c. "controlled working copy".

d. "satellite master copy" and "controlled".

QUESTION: 008 (1.00)

Copies of procedures made from the "Master Copy" are being used in the field.

They must be reverified for accuracy against the "Master Copy":

a. every shift.

b. prior to each use.

c. every 48 hours.

d. every 72 hours.

QUESTION: 009 (1.00)

A photo badge that has the term "X-KEY" printed below the photo badge means the individual:

a. may obtain a vital area key from the control room without further authorization.

b. may authorize the issuing of vital area keys to plant personnel.

c. may enter a vital area in non-emergency situations without utilizing the card reader.

d. has a vital area key permanently assigned.

QUESTION: 010 (1.00)

Which ONE of the following is NOT required to provide authorization for the clearance of a temporary modification?

a. System Engineer

b. Station Shift Supervisor

c. Manager Technical Support

d. Chief Shift Operator

QUESTION: 011 (1.00)

A Control Room Annunciator is temporarily out of service due to a faulty input (temperature switch).

In addition to an entry in the Defeated Annunciator Log, this condition is recorded by a:

a. temporary modification tag on the input device and the annunciator window.

b. "markup" on the input device and a defeated annunciator sticker on the annunciator window.

c. temporary modification tag on the annunciator window.

d. "markup" on both the input device and annunciator window.

QUESTION: 012 (1.00)

Which ONE of the following is a responsibility of the Chief Shift Operator (CSO) without obtaining further approvals?

a. Order the override of engineered safety features (ESFs)

b. Order actions which depart from Technical Specifications to protect the health and safety of the public

c. Order installation of jumpers in accordance with the Emergency Operating Procedures

d. Order the reactor shutdown when an operating parameter is exceeded

QUESTION: 013 (1.00)

Switches or Valves tagged with a "Blue Markup" shall only be operated with the permission of the:

a. Controller.

b. Markup Man.

c. Chief Shift Operator.

d. Station Shift Supervisor.

QUESTION: 014 (1.00)

A Red Markup which is to be cleared has an "OTHER" signed on who is not on site.

Which ONE of the following describes the requirements for clearing this Markup?

a. The "OTHER" must be contacted by telephone and give verbal concurrence to sign off

b. The "OTHER" must report to the site and personally sign off

c. The Station Shift Supervisor may sign off for the "OTHER" after noting it on the Markup

d. The Responsible Supervisor may take full responsibility for the "OTHER" on the Markup and sign off

QUESTION: 015 (1.00)

Work must be performed to maintain the reactor at power. The radiation field in the area is 400 mRem/hr fast neutron and 2.0 Rem/hr gamma. The worker assigned is 24 years old today, has a lifetime exposure through last quarter of 28 Rem on his NRC Form 4 and no recordable exposure for this quarter.

The maximum time this individual can stay in this area and not exceed his 10 CFR 20 exposure limits is:

a. 40 min.

b. 50 min.

c. 60 min.

d. 75 min.

QUESTION: 016 (1.00)

A High Radiation Area is defined as an area, where a major portion of the whole body could receive in 1 hour a dose in excess of:

a. 1 mRem but less than 10 mRem.

b. 10 mRem but less than 100 mRem.

c. 100 mRem but less than 1000 mRem.

d. 1000 mRem.

QUESTION: 017 (1.00)

In which ONE of the following areas is the use of radios for communication RESTRICTED?

a. Control Room

b. Control Rod Drive Hydraulic Control Units.

c. Clean-up Filter/Demin Control Panel

d. Turbine front standard

QUESTION: 018 (1.00)

A licensed reactor operator is required to work a 16 hour shift at the control board.

This operator should be periodically relieved of primary duties for a break period:

a. every 4 hours during the 16 hour period.

b. every 4 hours after 8 hours has been worked.

c. every 2 hours after 8 hours has been worked.

d. once after 8 hours has been worked.

QUESTION: 019 (2.00)

Following receipt of an initiation signal coincident with a 115 KV power failure, the core spray pumps will sequentially start.

Match the starting time delay in column B with the core spray pumps in column A.

The items from column B may be used once, more than once, or not at all and only a single answer may occupy one answer space.

COLUMN A (Core Spray Pumps)		COLUMN B (Starting Time Delay)
a.____	Core spray pumps 111 and 112	1. 0 seconds
b.____	Core spray pumps 121 and 122	2. 3.0 seconds
c.____	Core spray topping pumps 111 and 112	3. 7.0 seconds
d.____	Core spray topping pumps 121 and 122	4. 10 seconds
		5. 13 seconds
		6. 15 seconds
		7. 20 seconds

QUESTION: 020 (1.00)

Both containment spray and core spray systems have received a valid initiation signal.

If the core spray pumps fail to start, the containment spray pumps will:

a. not start, because the time delay relay requires core spray initiation first.

b. all start, 10 seconds after the last core spray should have started.

c. start one set, 5 seconds after the first core spray should have started.

d. start one set, 50 seconds after the initiation signal was received.

QUESTION: 021 (1.00)

Following a small break LOCA the Automatic Depressurization System (ADS) fails to actuate. Reactor Pressure is stable at 330 psig with level at 0 inches.

Which ONE of the following describes the Core Spray Status?

a. Pumps have started but are not injecting because the inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have not opened

b. Pumps have started, inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have opened and the system is injecting

c. Pumps have not started and inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have not opened

d. Pumps have not started, but inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have opened

QUESTION: 022 (1.00)

WHICH ONE of the following conditions will result in an IRM rod block?

a. Mode switch in REFUEL, IRM 14 downscale on range 2

b. Mode switch in STARTUP, IRM 14 at downscale on range 1

c. Mode switch in STARTUP, IRM 14 downscale on range 3

d. Mode switch in RUN, IRM 14 downscale on range 3

QUESTION: 023 (1.00)

The "REFUEL INST TRIP BYPASS CH 11 AND 12" keylock switches on panel "M" are in the "NON-COINCIDENT" position during refueling. Welding in the drywell results in an "UPSCALE TRIP" on IRM 11.

The reactor protection system and reactor manual control systems will generate a:

a. half scram without a rod block.

b. half scram with a rod block.

c. full scram without a rod block.

d. full scram with a rod block.

QUESTION: 024 (1.00)

During Operation at 100% power with APRM channel 14 bypassed, IRM channel 16 fails downscale.

In accordance with NI-OP-38B, "Intermediate Range Monitor" the required action is:

a. bypass IRM channel 16.

b. bypass IRM channel 16 and insert a half-scram on RPS channel 11.

c. bypass IRM channel 16 and insert a half-scram on RPS channel 12.

d. bypass IRM channel 16 insert a half-scram on RPS channel 12 and impose a Control Rod Block.

QUESTION: 025 (1.00)

During a power ascension with reactor power at 38% the Turbine Bypass Valves fail open. Reactor pressure remains stable in the normal band.

The operator should attempt to close the bypass valves by:

a. depressing the "Vacuum Trip #2" pushbutton.

b. decreasing the "Speed/Load Changer" setpoint.

c. operating the "Bypass Opening Jack Motor" in the closed direction.

d. shifting pressure control to the "Manual Pressure Regulator".

QUESTION: 026 (1.00)

During operation at 100% power an Electromatic Relief Valve (ERV) inadvertently opens and remains stuck open.

The operator is directed to check the status of the blue indicating light above the ERV control switches because this indicates:

a. actual valve position.

b. if the solenoid is energized.

c. the status of the acoustic monitor.

d. status of the tailpipe temperature element.

QUESTION: 027 (1.00)

During operation at 100% power a Reactor Safety Valve fails open.

In addition to changing Drywell parameters this would be indicated by:

a. an increased reactor vessel pressure due to turbine control valve closure.

b. an increased reactor vessel level due to increased steam flow sensed by the feedwater level control system.

c. a decreased steam flow signal sent to the feedwater control system due to steam flow through the safety valve.

d. an increased steam pressure signal sent to the main turbine control system to compensate for the decrease in steam line pressure.

QUESTION: 028 (1.00)

Which ONE of the following describes the response of the scram discharge volume valves, following a half scram signal?

a. Pilot air valves do not change position. Vent and drain valves remain open.

b. One pilot air valve repositions. Vent and drain valves remain open.

c. Pilot air valves change position. One set of vent and drain valves close.

d. One pilot air valve repositions. Both vent and drain valves close.

QUESTION: 029 (1.00)

Which ONE of the following is the result if hydraulic Control Unit valve CRD-101 is open while CRD-102 is closed.

a. The control rod will NOT fully insert if a scram occurs.

b. The Emergency Rod In function will fully insert the control rod if withdrawn.

c. Cooling water will be isolated from the control rod drive mechanism.

d. Severe personnel injury may result if a scram occurs.

QUESTION: 030 (1.00)

Which ONE of the following Reactor Protection System automatic scrams may be bypassed as a function of taking the mode switch from "RUN" to "STARTUP"?

a. Turbine Stop Valve Closure

b. Generator Load Reject

c. APRM Upscale Trip

d. Main Steam Line Isolation Valve Closure

QUESTION: 031 (1.00)

A loss of Reactor Trip Bus 131 has occurred. Upon restoration of power to Reactor Trip Bus 131 only three (3) of the WHITE Scram solenoid indicating lights for Reactor Trip Bus 131 are reenergized. All Reactor Trip Bus 141 side Scram indicating lights are energized.

Which ONE of the following describes the appropriate action?

a. Assume 1/4 of the control rods should have scrammed, initiate a manual scram and enter N1-SOP-1 Reactor Scram.

b. Assume 1/4 of the control rods have received a 1/2 scram, continue operations and investigate.

c. Momentarily insert and then reset an "A" side half scram to pick up the relay and energize the light.

d. If no control rods have scrammed, assume the light bulb is burned out and replace it.

QUESTION: 032 (1.00)

The CRD scram discharge volume high water level scram trip can be bypassed by its scram bypass switch if:

a. the mode switch is in RUN.

b. the mode switch is in SHUTDOWN only.

c. the mode switch is in REFUEL.

d. the mode switch is in STARTUP.

QUESTION: 033 (1.00)

Which ONE of the following is NOT a positive indication of a single control rod scram?

a. Increased CRD cooling water flow.

b. Accumulator Trouble Annunciator.

c. Control Rod Drift Annunciator.

d. Blue SCRAM light on full core display.

QUESTION: 034 (1.00)

During a scram from 100% power, which ONE of the following describes system response if the CRD Hydraulic Control Unit accumulator piston does NOT move?

NOTE: (Assume the accumulator is mechanically bound up.)

a. The control rod will fully insert using charging water pressure.

b. The control rod will insert until reactor and CRD pressures equalize.

c. The control rod will insert until the flow control valve opens.

d. The control rod will fully insert using reactor pressure.

QUESTION: 035 (1.00)

Which ONE of the following rod motion sequences does NOT open the "settle" valve, (directional control valve 120)?

a. Notch insert

b. Emergency insert

c. Continuous insert

d. Continuous withdrawal using Rod Out Notch Override

QUESTION: 036 (1.00)

Which ONE of the following methods will result in the largest overall differential pressure across the Control Rod Drive (CRD) piston for inserting control rods?

a. Open individual scram test switches.

b. Maximize CRD cooling water differential pressure.

c. Drive control rods using maximum drive pressure.

d. Vent the control rod overpiston area.

QUESTION: 037 (1.00)

The following conditions exist:

A fuel bundle is being raised from the core.
Neutron monitoring count rate is increasing.
No rod motion observed.

Which ONE of the following actions should be performed?

a. Continue withdrawing the fuel bundle, counts will eventually decrease.

b. Position the fuel bundle to the nearest safe location outside of the core.

c. Return the fuel bundle to the original location.

d. Stop all fuel movement.

QUESTION: 038 (1.00)

Which ONE of the following describes the MINIMUM required initial conditions for the Source Range Monitor (SRM) system in order to perform a reactor startup?

a. At least 3 SRM channels must be operable with detectors inserted far enough to provide a positive count rate of 3.0 CPS.

b. At least 3 SRM channels must be operable and fully inserted with at least 3.0 cps count rate.

c. All SRM channels must be operable with count rate of 3.0 cps or greater when the detector is fully inserted.

d. All SRM channels must be operable and fully inserted with at least 3 SRM channels equal to or greater than 3.0 CPS.

QUESTION: 039 (1.00)

What is the MAXIMUM emergency load allowed on the Emergency Diesel Generators in order to achieve safe shutdown conditions?

a. 1883 KW

b. 2560 KW

c. 2816 KW

d. 2945 KW

QUESTION: 040 (1.00)

When performing a Local Emergency Start of Diesel Generator (DG) 102/103, why is the Local/Remote switch left in REMOTE?

a. The generator field will not flash in LOCAL.

b. The DG will not start if the switch is left in LOCAL.

c. The control room will lose emergency shutdown capability.

d. The control room will lose output breaker control.

QUESTION: 041 (1.00)

Diesel Generator (DG) 102, fails to complete the start sequence in response to a manual start signal.

Which ONE of the following actions must be performed before DG 102 can be restarted?

a. Reset the governor overspeed trip mechanism.

b. Trip the 86 DG relays.

c. Push the 48X pushbutton in the diesel room control cabinet.

d. Place the control switch in STOP then back to START.

QUESTION: 042 (1.00)

Which ONE of the following may prevent Liquid Poison (LP) Pump 11 from injecting Boron to the reactor vessel if LP System 11 is initiated?

a. Explosive Valve 11 no continuity.

b. LP Pump 11 discharge accumulator vent valve open.

c. Test Tank to LP Pump 11 suction (LP-19) open.

d. LP System 12 injection in progress.

QUESTION: 043 (1.00)

RWCU discharge to the Main Condenser is in progress, via BV 33-11, Cleanup to Condenser BV.

Which ONE of the following is the adverse consequence of opening BV 33-10, CLEANUP TO WASTE BV during this evolution?

a. Formation of a void space would occur causing excessive water hammer.

b. Vacuum in the condenser may be lost via the Waste System.

c. Excessive blowdown flow could cause a Cleanup System isolation due to Low Pump Suction Pressure at 5 psig.

d. Excessive blowdown flow could cause resin damage and a system isolation at greater than 133 degrees F NRHX Exit temperature.

QUESTION: 044 (1.00)

With one Reactor Water Cleanup pump in operation, system flow must be:

a. between 500 to 760 gpm.

b. adjusted to maintain PCV downstream pressure 80 to 110 psig.

c. maintained greater than 120 gpm.

d. set to minimum but high enough to prevent loss of filter cake.

QUESTION: 045 (1.00)

Which ONE of the following provides the reason that one Reactor Building Emergency Ventilation System must be secured if the system is automatically initiated?

a. To ensure that the 10KW heater can reduce inlet humidity to meet design requirements.

b. To prevent excessive airflow which could damage the ductwork.

c. To prevent possible fan damage due to low air flow through one of the fans, if two fans are running.

d. To preclude excess contamination of both systems when only one is necessary by design.

QUESTION: 046 (1.00)

Feedwater (FW) pump #11 was operating in the HPCI mode when it automatically tripped on RPV high Level.

Which ONE of the following will allow restart of this pump?

a. Place FW pump 11 bias M/A station ID15 in MANUAL.

b. Press "FW Return to Normal After HPCI" channel pushbutton.

c. RPV water level decreases to the HPCI initiation setpoint.

d. Close FW pump 11 flow control valve.

QUESTION: 047 (1.00)

Which ONE of the following is a return for condensate from the Emergency Condenser System?

a. Recirc #11 discharge

b. Recirc #12 suction

c. Recirc #14 discharge

d. Recirc #15 suction

QUESTION: 048 (1.00)

Which ONE of the following will result in a loss of monitoring for drywell Hydrogen and Oxygen if no additional operator actions are taken?

a. Containment Atmospheric Dilution (CAD) channel 11 and 12 in "Bypass"

b. Containment pressure of 3.5 psig.

c. Stack monitors 11 and 12 upscale Hi-Hi trip.

d. Loss of power to the Post Accident Sample System.

QUESTION: 049 (1.00)

If the RPV level must be maintained above the Main Steam Line Nozzles to prevent thermal stratification, which ONE of the following instruments will encompass this specified level?

a. Hi/Low Rosemount

b. Narrow Range GEMAC

c. Wide Range GEMAC

d. Fuel Zone Water Level Monitoring System

QUESTION: 050 (1.00)

Which ONE of the following describes the automatic response of the Traversing Incore Probe (TIP) System to a Containment Isolation signal when a detector is in the core?

a. The Shear Valve closes if the detector is not fully retracted within the time delay set by the TIP controller.

b. The detector is retracted and the Shear Valve is closed after the detector is withdrawn past the Ball Valve.

c. The detector retracts to the IN-Shield position and the Ball Valve closes.

d. The detector retracts to the IN-Shield position and the Shear Valve closes.

QUESTION: 051 (1.00)

Which one of the following will occur if generator voltage is allowed to increase to the high voltage point (25.2Kv)?

a. The amplidyne will trip immediately.

b. The generator will trip immediately.

c. The amplidyne will trip in 60 seconds.

d. The generator will trip IF the amplidyne is running.

QUESTION: 052 (1.00)

Which ONE of the following will terminate a Turbine Governor Runback resulting from a trip of the running Stator Water Cooling pump?

a. Stator Water Cooling pump pressure above 80 psig.

b. Standby Stator Water Cooling pump start.

c. Generator load is reduced below 4450 amperes.

d. All bypass valves are full open

QUESTION: 053 (1.00)

Which ONE of the following is the function of the Off-Gas Mixing Jet?

a. Assist the 2nd stage steam jet air ejectors in removing off-gas.

b. Ensure that Hydrogen concentration is maintained below 4%.

c. Provide the motive force to move steam/gas mixture through the system.

d. Preheat the steam/gas mixture to 285-350 degrees F.

QUESTION: 054 (1.00)

In order to prevent possible recirculation pump seal damage, the rate of temperature change for the Reactor Building Closed Loop Cooling System should be limited to a maximum of:

a. 5 degrees F. per hour.

b. 10 degrees F. per hour.

c. 15 degrees F. per hour.

d. 20 degrees F. per hour.

QUESTION: 055 (1.00)

At what point in the starting sequence of a recirculation pump is the individual M/A controller placed in direct control of pump speed?

a. When the field breaker closes to excite the generator.

b. As the pump speed settles out at 20%.

c. When the discharge valve is open beyond 20%.

d. After the 30 second starting sequence relay times out.

QUESTION: 056 (1.00)

Which ONE of the following set of conditions will indicate plant operation in the "Restricted Zone"? (Power/Flow map is attached)

a. 70% rod line with 40% core flow

b. 80% rod line with 50% core flow

c. 90% rod line with 40% core flow

d. 100% rod line with 50% core flow

QUESTION: 057 (1.00)

Operation of the Rod Worth Minimizer (or human RWM) below 20% power is required to:

a. prevent selection of a control rod which could allow individual control rods to have greater than acceptable reactivity worth.

b. prevent control rod drop accidents.

c. limit or prevent fuel damage from a continuous rod withdrawal accident.

d. limit control rod reactivity addition in the event that rod worth is higher than expected.

QUESTION: 058 (1.00)

The 20% low power set point used to enable or disable the Rod Worth Minimizer constraints is sensed from:

a. steam flow.

b. feed flow.

c. steam and feed flow.

d. APRM power.

QUESTION: 059 (1.00)

In order to remain within the licensing basis, the Spent Fuel Pool water temperature must be maintained:

a. less than 125 degrees F.

b. above 50 degrees F.

c. between 70 degrees F. and 212 degrees F.

d. between 68 degrees F. and 123 degrees F.

QUESTION: 060 (1.00)

If offsite power is lost, loads are stripped from Power Boards 16B and 17B.

Which ONE of the following loads is NOT stripped if power is lost to Power Boards 16 and 17

a. Post Accident Sample System.

b. Instrument Air Compressor.

c. Liquid Poison Pumps.

d. Main Turbine Lift Pumps.

QUESTION: 061 (1.00)

Which ONE of the following describes the battery charging motor generator set (161&171) response to a loss of 600 volt input power?

a. The output will restored approximately 10 seconds after the Diesel Generator starts.

b. The MG will return to AC drive 100 seconds after input power is restored.

c. The MG will shift to alternate power in .25 seconds.

d. The MG will stop and must be manually restarted when input power is restored.

QUESTION: 062 (1.00)

Which ONE of the following describes the purpose of the APRM System rod block functions?

a. Ensure core coupling yeilds decreased rod worths.

b. Provide reactivity addition limits for a rod drop accident prior to reaching high flux scram setpoints.

c. Ensure that the Local Peaking Factor due to rod withdrawal does not exceed the average Total Peaking Factor.

d. Limit the gross power increase from control rod withdrawal so that MCPR is Maintained greater than Safety Limit Critical Power Ratio.

QUESTION: 063 (1.00)

During refueling operations, placing the Fuel Pool Keylock Switch on panel "G" in the "REFUEL" position will perform what function?

a. Aligns the Refuel Bridge High Range Radiation Monitor to the Reactor Building Emergency Ventilation initiation logic.

b. Aligns electrical power to the refuel bridge components.

c. Enables the refuel bridge interlocks and rod block circuitry.

d. Changes the setpoint of the refuel floor high radiation alarm to that specified for handling spent fuel.

QUESTION: 064 (1.00)

One of the subsequent steps taken following a Station Blackout is to vent Hydrogen Gas from the Main Generator .

Which ONE of the following is the Bases for this step?

a. Damage to the generator seals will result from high hydrogen pressure caused by loss of cooling

b. Turbine building ventilation is not available to prevent Hydrogen gas pocket buildups

c. The emergency seal oil pump must be secured to preserve adequate battery capacity

d. The emergency seal oil pump is powered from vital AC and is not available

QUESTION: 065 (1.00)

The Load Shedding associated with a station blackout will provide a Station Battery Reserve of:

a. 4 hours.

b. 8 hours.

c. 12 hours.

d. 24 hours.

QUESTION: 066 (1.00)

Following every Reactor Scram it is necessary to place the Scram Discharge Volume (SDV) High Level Switches in "BYPASS".

This is necessary because:

a. the SDV fills up completely on every scram.

b. the reactor mode switch is not left in "SHUTDOWN".

c. the SDV high level scram is bypassed on every scram regardless of level.

d. it ensures the SDV vent and drain valves do not open until the scram is reset.

QUESTION: 067 (1.00)

Following an automatic Reactor Scram the Rector Mode Switch is first taken to "SHUTDOWN" prior to going to "REFUEL".

The reason for going to "SHUTDOWN" first is:

a. to ensure all channels of the Reactor Protection System (RPS) trip.

b. to bypass the Main Steam Isolation Valve low pressure closure.

c. to ensure the Scram Discharge Volume vent and drain valves close.

d. to insert the mode switch scram (redundant scram signal).

QUESTION: 068 (1.00)

The time delay associated with automatic actuation of the Emergency Cooling System is to:

a. prevent actuation while the electromatic relief valves are open.

b. prevent unnecessary actuation during anticipated turbine trips.

c. allow complete control rod insertion prior to actuation.

d. allow time for the condensate return isolation valves to open.

QUESTION: 069 (1.00)

Operation with reactor vessel level below the low level alarm setpoint will cause excessive "Steam Carryunder".

Which ONE of the following is a result of "Steam Carryunder"?

a. Increase in moisture carryover in the steam

b. Increase in core flow

c. Decrease in recirculation pump net positive suction head

d. Decrease in SLCPR

QUESTION: 070 (1.00)

A loss of Feedwater Heating has occurred which results in a temperature decrease of 102 degrees F.

A required immediate operator action is to:

a. reduce recirculation flow to less than 36 Mlbs/hr.

b. insert the required "CRAM" rods to the 80% rod line.

c. scram the reactor.

d. trip the turbine.

QUESTION: 071 (1.00)

After a Reactor Scram which ONE of the following conditions require entry into N1-EOP-3, "Failure to Scram"?

a. One rod "green background light" not illuminated all remaining rods have "green background lights" illuminated.

b. One rod "green background light" illuminated with no readout, all remaining rods have "green background lights" illuminated with 00 indicated.

c. All rods inserted to position 02

d. One rod at position 04 remaining rods at position 00

QUESTION: 072 (1.00)

Which ONE of the following is a required operator action prior to performing a control room evacuation?

a. Transfer house loads

b. Activate the emergency plan and declare an ALERT

c. Scram the reactor Deleted

d. Sound the station alarm and announce the evacuation.

QUESTION: 073 (1.00)

The CONTROL TRANSFER SWITCH for Emergency Cooling Steam Isolation Valve, 39-08 has inadvertently been placed in "EMER" at the Remote Shutdown Panel (RSP).

Which ONE of the following describes the affect this has on valve operation?

a. The valve can only be operated from the RSP

b. The valve can be operated from both the Control Room (CR) and RSP with for all functions still available from both locations

c. The valve will not function from either location until the RSP is powered up

d. The valve can be operated from the CR and RSP however, "Pull to Stop" will not function from the CR

QUESTION: 074 (1.00)

During refueling, with the Spent Fuel Pool in communication with the Reactor Cavity, the pool level is observed to be decreasing.

Which ONE of the following is the LEAST preferred makeup method to restore level?

a. Core Spray with suction from the Torus

b. Control Rod Drive pumps

c. Fire water via the feedwater system

d. Condensate system

QUESTION: 075 (1.00)

During a plant cooldown it is necessary to maintain the suction and discharge valves of at least two Reactor Recirculation Loops open to:

a. ensure that reactor vessel level indication equals water level inside shroud.

b. prevent thermal stratification of water inside the vessel.

c. ensure a flowpath through the reactor vessel to maintain water clarity.

d. ensure a natural circulation flowpath for ambient decay heat removal.

QUESTION: 076 (1.00)

Prior to initiating Containment Sprays in accordance with N1-EOP-4 "Primary Containment Control" the operator is directed to trip all Drywell Cooling Fans.

This is required because:

a. operation concurrent with spray would cause too rapid of a pressure decrease.

b. spray will cause electrical arcing which could detonate hydrogen.

c. they are not qualified to operate in a spray environment.

d. water saturating the filters would render them ineffective for fission product removal post LOCA.

QUESTION: 077 (1.00)

During operation at 100% power all Reactor Recirculation Pumps simultaneously trip.

Which ONE of the following parameters would verify a spurious Anticipated Transient Without Scram/Recirculation Pump Trip (ATWS/RPT) had occurred?

a. Reactor vessel level and power.

b. Loss of RPS and 125 volt DC power on the same ATWS channel.

c. Reactor vessel level and turbine first stage pressure.

d. Reactor vessel pressure and level.

QUESTION: 078 (1.00)

A faulted high reactor pressure signal has satisfied the ATWS-ARI logic. The operator immediately places the key locked switch on the "F" Panel from "NORMAL" to "INTERRUPT".

Which ONE of the following describes the effect this has on the ATWS-ARI initiation logic?

a. The logic will be overridden after the 25 second timer resets

b. The logic will immediately be overridden

c. Once the logic has initiated the key locked switch has no effect

d. It enables the ATWS "LOV RESET" pushbutton which must be actuated to override the logic

QUESTION: 079 (1.00)

Whenever heat from relief valve testing is being added to the Suppression Pool, the pool temperature shall be monitored and logged every:

a. 5 minutes

b. 10 minutes

c. 15 minutes

d. 30 minutes

QUESTION: 080 (1.00)

If Torus water level cannot be maintained above 8.0 feet, why must ERVs be verified closed?

This minimum level is chosen because; below this level:

a. insufficient volume of water remains to absorb the reactor coolant system energy.

b. the heat addition will cause an insufficient NPSH for the ECCS pumps.

c. the primary containment vents will be uncovered.

d. a direct pressurization of the torus air space will result.

QUESTION: 081 (1.00)

Which ONE of the following combinations of RPV water levels and injection systems meets the criteria for "Adequate Core Cooling," with the reactor depressurized?

a. -50 inches with no injection systems running

b. -85 inches with one loop of core spray injecting

c. -100 with both loops of core spray injecting

d. -120 inches with 3 ERVs open and containment spray raw water injecting via core spray

QUESTION: 082 (1.00)

During implementation of EOP-3, "Failure to Scram" RPV water level is lowered to:

a. increase the natural circulation flow, enhancing the boron mixing.

b. increase the steam generation rate, reducing power.

c. reduce the natural circulation driving head, increasing voids.

d. reduce the volume of water therefore, decreasing the amount of boron required.

QUESTION: 083 (1.00)

During operation, an inadvertent trip of one reactor recirculation pump places the unit in the "Restricted Zone" of the Power Flow Operating Map, without causing thermal hydraulic instability.

The operator should exit the "Restricted Zone" by:

a. restarting the tripped pump.

b. lowering reactor power below 80% rodline by inserting "CRAM" rods.

c. decreasing reactor power with recirculation flow.

d. immediately scramming the reactor.

QUESTION: 084 (1.00)

Following the trip of one reactor recirculation pump, thermal hydraulic instability is indicated by:

a. periodic LPRM upscale alarms.

b. periodic LPRM downscale alarms.

c. power oscillations greater than 5% of rated on the APRMs.

d. flux oscillations greater than 10% on the LPRMs

QUESTION: 085 (2.00)

Match the main condenser vacuum setpoints in column B with the actuation in column A.

The items from column B may be used once, more than once, or not at all and a only a single answer may occupy one answer space.

COLUMN A (Actuation)	COLUMN B (Vacuum Setpoints)
a.____ reactor scram	1. 5 inches Hg
b.____ turbine bypass valve closure	2. 7 inches Hg
c.____ main steam isolation valve closure	3. 10 inches Hg
d.____ turbine stop valve closure	4. 20 inches Hg
	5. 23 inches Hg
	6. 25 inches Hg

QUESTION: 086 (1.00)

Following a loss of power on 125 VDC Battery Board 11 the alternate 125 VDC control power is supplied to Diesel Generator (DG) 102.

Which ONE of the following describes the effect this will have on Diesel Generator 102?

a. There is no effect on DG operation after the alternate 125 VDC control power is supplied

b. The DG will automatically start but the output breaker must be closed remotely

c. The diesel can be started but local-manual speed control must be utilized

d. The DG can be started and brought up to speed but local-manual operation must be utilized for the output breaker

QUESTION: 087 (1.00)

A loss of 24 VDC Bus 11 will result in:

a. tripping the stack blocking valve.

b. initiation of reactor building emergency ventilation system.

c. a reactor scram if the "MODE" switch is in run.

d. closing the containment vent and purge valves.

QUESTION: 088 (1.00)

The reason a turbine trip with reactor power above 45% results in a direct reactor scram is:

a. above this power the EPR cannot respond fast enough to prevent a reactor high pressure scram.

b. the loss of extraction steam to the feedwater heaters would result in a high neutron flux scram.

c. that is the maximum energy removal capacity of the bypass valves.

d. above this power level a Turbine trip without bypass may cause the MCPR to be lower than SLPR.

QUESTION: 089 (1.00)

Following a transient, reactor vessel level increases to the feed pump high level trip setpoint. The operator is directed to restart the feedpumps and regain level control.

Which ONE of the following describes the actions necessary to regain vessel level control.

a. Allow level to decrease 10 inches below the high level trip setpoint, and restart the pumps manually.

b. Place the high level trip bypass switch in "Bypass" and allow the pumps to restart automatically.

c. Place the high level trip bypass switch in "Bypass" and restart the pumps manually.

d. 10 seconds after level decreases below the high level trip setpoint, restart the pumps manually.

QUESTION: 090 (1.00)

Following a loss of Service Water the operator is unable to place the Emergency Service Water System (ESW) in service.

The operator is directed to supply Fire Water for cooling, directly to the:

a. emergency condensers.

b. reactor building closed loop cooling heat exchangers.

c. instrument air compressor intercoolers.

d. main turbine lube oil tank coolers.

QUESTION: 091 (1.00)

Following a loss of instrument air, CRD instrument air pressure is decreasing.

A manual reactor scram is required when CRD instrument air pressure decreases below:

a. 50 psig.

b. 60 psig.

c. 70 psig.

d. 80 psig

QUESTION: 092 (1.00)

With Reactor Feedwater operating in the HPCI mode, a loss of instrument air occurs.

The Feedwater Flow Control Valves, ID12A and ID12B will:

a. fail open.

b. fail closed.

c. fail as is.

d. continue to respond because of backup accumulator supplies.

QUESTION: 093 (1.00)

A high Drywell pressure of 3.7 psig will initiate a:

a. primary coolant isolation (vessel isolation).

b. main steam system isolation.

c. reactor water cleanup system isolation.

d. core spray pump discharge test line isolation.

QUESTION: 094 (1.00)

Which ONE of the following signals will result in an automatic closure of both Shutdown Cooling system isolation valves, 38-01 and 38-02.

a. Reactor vessel level less than +5 inches

b. Reactor vessel pressure greater than 120 psig

c. Reactor vessel temperature greater than 350 degrees F.

d. Reactor recirculation pump 14 isolated

QUESTION: 095 (1.00)

A failure of both Control Rod Drive (CRD) Pumps requires a reactor scram because of a loss of :

a. cooling water.

b. charging water.

c. CRD pump coolant injection.

d. drive flow.

QUESTION: 096 (1.00)

Which ONE of the following systems would be isolated after entry into EOP-5, "Secondary Containment Control," if it were discharging into an area with a floor drain sump level exceeding its alarm point?

a. Core spray

b. Control rod drive

c. Fire water

d. Reactor water cleanup

QUESTION: 097 (1.00)

If Reactor Building (RB) Ventilation exhaust radiation level exceeds 5 mR/hr while executing EOP-5,"Secondary Containment Control" the operator is directed to verify RB ventilation isolates.

Which ONE of the following is the reason for that step?

a. Terminate release of radioactivity to the environment

b. Ensure personnel access to the RB is not precluded

c. This is the maximum safe operating level of the ventilation system

d. Maintain a positive reactor building pressure with respect to atmosphere

(********** END OF EXAMINATION **********)

ANSWER: 001 (1.00)

b.

REFERENCE:

FPS Halon N1-OP-21D rev 2, pg 3, D.5

[3.2/3.2]

286000A105 ..(KA's)

ANSWER: 002 (1.00)

d.

REFERENCE:

ADS Ops Tech Ch 15, rev 4, pg 8 & 9 & 12 and fig 15-3

[3.4/3.6]

218000A205 ..(KA's)

ANSWER: 003 (1.00)

c.

REFERENCE:

Technical Specification, 2.1. 01-LOT-008-362-1-01, Objective EO 2.1

[3.4/4.2]

295007G003 ..(KA's)

ANSWER: 004 (1.00)

b

REFERENCE:

Nuc Fuel and Control rods, Ops Tech Ch 2, rev 2, pg 11

[3.0/3.7]

234000K505 ..(KA's)

ANSWER: 005 (1.00)

b.

REFERENCE:

Operations Procedure NI-OP-5 CRD System rev 28, pg 16

[3.8/3.9]

201003K402 ..(KA's)

ANSWER: 006 (1.00)

a.

REFERENCE:

CRD System Ops Tech Ch 5, rev 5, pg 14 and fig 5a

[3.5/3.6]

201001K203 ..(KA's)

ANSWER: 007 (1.00)

c.

REFERENCE:

NIP-PRO-01, Use of Procedures" page 3.

[2.9/3.4]

294001A101 ..(KA's)

ANSWER: 008 (1.00)

d.

REFERENCE:

NIP-PRO-01, Use of Procedures" page 6.

[2.9/3.4]

294001A101 ..(KA's)

ANSWER: 009 (1.00)

d.

REFERENCE:

NIP-SEC-02, General Security Requirements" page 4. NIP-SEC-01, "Protected/Vital Area Access page 5.

[3.2/3.7]

294001K105 ..(KA's)

ANSWER: 010 (1.00)

c.

REFERENCE:

AP-6.1, "Control of Equipment Temporary Modifications" page 9 EO-4.0

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 011 (1.00)

b. or "d" facility comment accepted

REFERENCE:

AP-6.1, "Control of Equipment Temporary Modifications" page 10. EO-8.0

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 012 (1.00)

d.

REFERENCE:

GAP-OPS-01, "Administration of Operations" pages 6&7.

[3.3/4.3]

294001A111 ..(KA's)

ANSWER: 013 (1.00)

b.

REFERENCE:

GAP-OPS-02, "Control of Equipment Markups" page 1.

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 014 (1.00)

d.

REFERENCE:

GAP-OPS-02, "Control of Equipment Markups" page 16.

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 015 (1.00)

b.

REFERENCE:

10 CFR 20
400 + 2000= 2400 mRem/hr 5X(N-18)= 30 Rem 30-28= 2 Rem (2000 Mrem)
2000/2400=.833 hours = 50 minutes

[3.3/3.8]

294001K103 ..(KA's)

ANSWER: 016 (1.00)

c.

REFERENCE:

S-RAP-RPP-0103, "Posting Radiological Areas" page 3.

[3.3/3.8]

294001K103 ..(KA's)

ANSWER: 017 (1.00)

a.

REFERENCE:

SRAP-RPP-0109, "Communications Guidelines" page 3.

[3.1/3.2]

294001A104 ..(KA's)

ANSWER: 018 (1.00)

b.

REFERENCE:

Technical Specification 6.2.2.h. 01-LOT-1-006-343-02 page 12 EO-18

[2.7/3.7]

294001A103 ..(KA's)

ANSWER: 019 (2.00)

a. 1

b. 5

c. 3

d. 7

REFERENCE:

Operations Technology Chapter 17, Core Spray page 16. EO.8

[3.3/3.5]

209001K409 ..(KA's)

ANSWER: 020 (1.00)

d.

REFERENCE:

Operations Technology Chapter 17, Core Spray page 17.

[3.5/3.6]

223001K112 ..(KA's)

ANSWER: 021 (1.00)

b.

REFERENCE:

Operations Technology Chapter 17 Core Spray page 1.

[3.6/3.7]

209001K611 ..(KA's)

ANSWER: 022 (1.00)

c.

REFERENCE:

Operation Technology Chapter 9B page 16.

[3.7/3.7]

215003K401 ..(KA's)

ANSWER: 023 (1.00)

d.

REFERENCE:

NI-OP-38B, "Intermediate Range Monitor" page 2.

[4.0/4.0]

215003K402 ..(KA's)

ANSWER: 024 (1.00)

a.

REFERENCE:

NI-OP-38B, "Intermediate Range Monitor" page 5.

[3.5/3.7]

215003A202 ..(KA's)

ANSWER: 025 (1.00).

a.

REFERENCE:

N1-OP-31, "Tandem Compound Reheat Turbine" page 33

[4.1/4.2]

241000A203 ..(KA's)

ANSWER: 026 (1.00)

b.

REFERENCE:

N1-OP-1 "Nuclear Steam Supply System (NSSS)" pages 11 and 25.

[3.6/3.6]

239002A407 ..(KA's)

ANSWER: 027 (1.00)

c.

REFERENCE:

Operations Technology Chapter 27 page 2. Chapter 21 Main Steam System page 3.

[3.5/3.6]

239002K103 ..(KA's)

ANSWER: 028 (1.00)

b.

REFERENCE:

CRD System Ops Tech, Ch 5a, rev 5, pg 10 & 11

[3.5/3.4]

201001A105 ..(KA's)

ANSWER: 029 (1.00)

d.

REFERENCE:

CRD Operating procedure N1-OP-5 rev 28, pg 9, "WARNING"

[3.2/3.3]

201001G010 ..(KA's)

ANSWER: 030 (1.00)

d.

REFERENCE:

RPS Ops Tech Ch 10, rev 4, pg 7

[3.9/4.1]

212000K412 ..(KA's)

ANSWER: 031 (1.00)

b. or "d" facility comment accepted

REFERENCE:

RPS Ops Tech Ch 10, rev 4,
CHECK RPS TERMINOLOGY WITH FACILITY

[3.9/3.8]

212000A304 ..(KA's)

ANSWER: 032 (1.00)

c.

REFERENCE:

RPS Ops Tech Ch 10, rev 4, pg 7

[3.9/3.9]

212000A404 ..(KA's)

ANSWER: 033 (1.00)

a.

REFERENCE:

CRD Ops Tech Ch 5a rev 5 & Ch 5b rev 2
CRD System N1-OP-5 rev 28 pg 49

[3.5/3.3]

214000G008 ..(KA's)

ANSWER: 034 (1.00)

d.

REFERENCE:

CRD Ops Tech Ch 5a, rev 5, pg 13

[3.6/3.7]

201003K404 ..(KA's)

ANSWER: 035 (1.00)

b.

REFERENCE:

RMC System Ops Tech Ch 5b, rev 2, pg 9 and Fig 5b-3

[3.5/3.5]

201002K406 ..(KA's)

ANSWER: 036 (1.00)

a.

REFERENCE:

CRD Ops Tech Ch 5a rev 5, RMCS Ops Tech 5b rev 2,
Note:Test switch not close SDV vent/drain thus no back pressure

[3.2/3.2]

201002K101 ..(KA's)

ANSWER: 037 (1.00)

d.

REFERENCE:

Refueling N1-OP-34 rev 11, pg 28, H.2.1.3.
NRC IEN 88-21

[3.3/3.1]

290002G014 ..(KA's)

ANSWER: 038 (1.00)

b.

REFERENCE:

SRM Operating Procedure N1-OP-38A rev 12, pg 5, item F
T/S 3.5.1. pg 180
SRM Ops Tech Ch 9a, rev 4, pg 11, table 9a-6, rod blocks

[3.4/3.6]

215004A407 ..(KA's)

ANSWER: 039 (1.00)

d.

REFERENCE:

Emergency DG Operating Procedure N1-OP-45 pg 5
House Service N1-OP-30 rev 11, pg 29, "CAUTION" and pg 6, D.4.0

[3.2/3.6]

264000G010 ..(KA's)

ANSWER: 040 (1.00)

a.

REFERENCE:

Emergency DG N1-OP-45 rev 20, pg 6 bottom para, pg 20 H4 & H5

[3.3/3.4]

264000K407 ..(KA's)

ANSWER: 041 (1.00)

c.

REFERENCE:

Emergency DG N1-OP-45 rev 20, pg 8, D.3.0

[3.8/3.9]

264000G009 ..(KA's)

ANSWER: 042 (1.00)

c. or "b" facility comment accepted

REFERENCE:

LP System Ops Tech Ch 8, rev 5
LP System N1-OP-12 rev 21

[4.0/4.1]

211000A109 ..(KA's)

ANSWER: 043 (1.00)

b.

REFERENCE:

Reactor Cleanup Operating Procedure N1-OP-3 rev 20, pg 43, "CAUTIONS"

[3.2/3.2]

204000G010 ..(KA's)

ANSWER: 044 (1.00)

c.

REFERENCE:

RWCU N1-OP-3 rev 20, pg 8 and 15
RWCU Ops Tech Ch 7 rev 4, pg 15

[3.0/2.9]

204000A406 ..(KA's)

ANSWER: 045 (1.00)

a.

REFERENCE:

RB HVC System Operation Procedure N1-OP-10 rev 10, pg 7, item 7

[3.1/3.3]

261000G010 ..(KA's)

ANSWER: 046 (1.00)

c.

REFERENCE:

FWC System Ops Tech Ch 23b rev1, pg 11
FAC question 7, TRAIN Q151 and FAC question 6, TRAIN Q150

[4.0/4.1]

206000K102 ..(KA's)

ANSWER: 047 (1.00)

d.

REFERENCE:

EC System Ops Tech Ch 14 rev 7, fig 14-1

[3.0/3.2]

207000K108 ..(KA's)

ANSWER: 048 (1.00)

b.

REFERENCE:

Drywell Inerting and CAD Ops Tech Ch 12b rev 2, pg 12
FAC QUESTION 28, TRAIN Q379

[3.3/3.5]

223002K304 ..(KA's)

ANSWER: 049 (1.00)

c.

REFERENCE:

SDC System Ops Tech Ch 20a rev 5, pg 9

[3.8/3.7]

205000A406 ..(KA's)

ANSWER: 050 (1.00)

c.

REFERENCE:

TIP Operating Procedure N1-OP-39 rev 13, pg 14 & 15 sect H

[3.4/3.5]

215001K401 ..(KA's)

ANSWER: 051 (1.00)

a.

REFERENCE:

Generator N1-OP-32 rev 16, pg 4, D.6.0

[3.6/3.6]

245000A301 ..(KA's)

ANSWER: 052 (1.00)

c.

REFERENCE:

Generator Ops Tech Ch 32a rev3, pg 20 in conjunction with Generator N1-OP-32 rev 16 pg 4, D.10 for ampere value

[2.9/2.9]

245000K605 ..(KA's)

ANSWER: 053 (1.00)

b.

REFERENCE:

OFF-GAS Ops Tech Ch 24b rev 4, pg 3
CAR & OFF-GAS N1-OP-25 rev 16, pg 4

[2.9/3.3]

271000K401 ..(KA's)

ANSWER: 054 (1.00)

b.

REFERENCE:

NSSS N1-OP-1 rev 38, pg 14, D.12

[3.1/3.2]

202001K107 ..(KA's)

ANSWER: 055 (1.00)

c.

REFERENCE:

Recirculation Ops Tech Ch 4 rev 4, pg 15 & 16

[3.1/3.0]

202001A302 ..(KA's)

ANSWER: 056 (1.00)

c.

REFERENCE:

Operating procedure N1-OP-43 rev 35, pg 38, F.2.5.1, 80%rod/45%flow.

[4.0/4.2]

202001G015 ..(KA's)

ANSWER: 057 (1.00)

a.

REFERENCE:

RWM N1-OP-37 rev 13 pg 2, 6.B, First Sentence.

[3.4/3.4]

201006G004 ..(KA's)

ANSWER: 058 (1.00)

c.

REFERENCE:

RWM N1-OP-37 rev 13, pg 3, B. 2nd para.

[3.1/3.2]

201006K104 ..(KA's)

ANSWER: 059 (1.00)

d.

REFERENCE:

Refueling N1-OP-34 rev 11, pg 9, D.1

[2.8/2.9]

233000G010 ..(KA's)

ANSWER: 060 (1.00)

c.

REFERENCE:

House Service N1-Op-30 rev 11, pg 3, B.1

[3.4/3.5]

262001A303 ..(KA's)

ANSWER: 061 (1.00)

b.

REFERENCE:

MG Sets N1-OP-48 rev 15, pg 4,5,6.

[3.2/3.5]

263000K601 ..(KA's)

ANSWER: 062 (1.00)

d.

REFERENCE:

T/S Bases for 3.6.3. pg 237a

[3.3/3.4]

215002G004 ..(KA's)

ANSWER: 063 (1.00)

a.

REFERENCE:

Refueling N1-OP-34 rev 11, pg 22, F, NOTE

[3.7/4.1]

272000K402 ..(KA's)

ANSWER: 064 (1.00)

c.

REFERENCE:

NI-SOP-18 "Station Blackout" pages 3&4.

[3.4/3.5]

295003K206 ..(KA's)

ANSWER: 065 (1.00)

b.

REFERENCE:

NI-SOP-18 "Station Blackout" page 4.

[3.5/3.6]

295003K303 ..(KA's)

ANSWER: 066 (1.00)

c.

REFERENCE:

NI-SOP-1 "Reactor Scram" page 3. Operations Technology Chapter 10 page 15.

[4.3/4.3]

295006K201 ..(KA's)

ANSWER: 067 (1.00)

d.

REFERENCE:

NI-SOP-1 "Reactor Scram" page 1. OPS/438 Chapter 10, RPS page 12

[4.2/4.2]

295006A101 ..(KA's)

ANSWER: 068 (1.00)

b.

REFERENCE:

OP Tech Chapter 14 page 2.

[4.0/4.2]

295007K301 ..(KA's)

ANSWER: 069 (1.00)

c.

REFERENCE:

Ops Tech Chapter 3 page 6.

[2.7/2.9]

295009K101 ..(KA's)

ANSWER: 070 (1.00)

c.

REFERENCE:

NI-SOP-2, "Unexplained Reactor Power Change" page 1.

[4.0/4.1]

295014A101 ..(KA's)

ANSWER: 071 (1.00)

d.

REFERENCE:

N1-EOP-3, "Failure to Scram" entry conditions.

[4.2/4.4]

295015G011 ..(KA's)

ANSWER: 072 (1.00)

b.

REFERENCE:

Deleted

N!-SOP-9, "Control Room Evacuation" page 1

[3.1/4.5]

295016G002 ..(KA's)

ANSWER: 073 (1.00)

d.

REFERENCE:

N1-SOP-9 "Control Room Evacuation" page 9. OPS Tech Chapter 14 page 14.

[4.1/4.1]

295016G006 ..(KA's)

ANSWER: 074 (1.00)

c.

REFERENCE:

N1-SOP-20, "Reported or Observed Loss of Spent Fuel Pool/Reactor Cavity Inventory" page 3.

[3.4/3.7]

295023A202 ..(KA's)

ANSWER: 075 (1.00)

a.

REFERENCE:

N1-OP-34, "Refueling Procedure" page 9.

[2.9/3.6]

295023G007 ..(KA's)

ANSWER: 076 (1.00)

c.

REFERENCE:

N1-EOP-4 "Primary Containment Control" Bases page 43.

[3.3/3.4]

295024K218 ..(KA's)

ANSWER: 077 (1.00)

d.

REFERENCE:

N1-OP-40, "Reactor Protection and ATWS System" page 8. OPs Tech chapter 4 page 18.

[4.1/4.1]

295025A107 ..(KA's)

ANSWER: 078 (1.00)

b.

REFERENCE:

NI-OP-40, "Reactor Protection and ATWS system pag2 9.

[4.1/4.1]

295025A107 ..(KA's)

ANSWER: 079 (1.00)

a.

REFERENCE:

Technical Specification 4.3.2 page 130.

[3.6/4.5]

295026G008 ..(KA's)

ANSWER: 080 (1.00)

d.

REFERENCE:

NMP1-EOP-4, "Primary Containment Control" Bases page 56.

[3.8/4.1]

295030K301 ..(KA's)

ANSWER: 081 (1.00)

a.

REFERENCE:

NMP1-EOP-2, "RPV Control" Bases page 38.

[4.6/4.8]

295031A204 ..(KA's)

ANSWER: 082 (1.00)

c.

REFERENCE:

NMP1-EOP-3 "Failure to Scram" Bases page 21.

[4.1/4.5]

295037K303 ..(KA's)

ANSWER: 083 (1.00)

b.

REFERENCE:

N1-SOP-13, "Unexplained Reactor Power Changes" page 2.

[2.5/3.3]

295001K104 ..(KA's)

ANSWER: 084 (1.00)

a.

REFERENCE:

N1-SOP-13, "Unexplained Reactor Power Changes" page 1.

[3.3/3.4]

295001A106 ..(KA's)

ANSWER: 085 (2.00)

a. 5

b. 3

c. 2

d. 4

REFERENCE:

N1-OP-40, "Reactor Protection and ATWS" page 6

[3.1/3.2]

295002K202 ..(KA's)

ANSWER: 086 (1.00)

d.

REFERENCE:

N1-OP-47A, "125 VDC Power System" page 15.

[3.8/4.1]

295004A102 ..(KA's)

ANSWER: 087 (1.00)

b.

REFERENCE:

N1-OP-47B, "24 VDC Power System" page 10.

[3.3/3.3]

295004K203 ..(KA's)

ANSWER: 088 (1.00)

d.

REFERENCE:

N1-OP-31, "Tandem Compound Reheat Turbine" page 3. N1-SOP-4, "Turbine Trip" page 1.

[3.8/3.8]

295005K301 ..(KA's)

ANSWER: 089 (1.00)

c. or "b" facility comment accepted

REFERENCE:

N1OP-16 "Feedwater System Booster Pump To Reactor" pages 8 and 30.

[3.5/3.5]

295008A108 ..(KA's)

ANSWER: 090 (1.00)

b.

REFERENCE:

N1-SOP-7, "Service Water Failure" page 1.

[3.3/3.4]

295018A101 ..(KA's)

ANSWER: 091 (1.00)

b.

REFERENCE:

N1-SOP-6.1, "Instrument Air Failure" page 1.

[3.7/3.4]

295019G010 ..(KA's)

ANSWER: 092 (1.00)

c.

REFERENCE:

N1-SOP-6.1, Instrument Air Failure" page 2

[2.7/2.7]

295019K217 ..(KA's)

ANSWER: 093 (1.00)

d.

REFERENCE:

N1-SOP-17, Vessel/Containment Isolation" page 4. Operations Technology Chapter 11 page 11.

[3.6/3.6]

295020A101 ..(KA's)

ANSWER: 094 (1.00)

a.

REFERENCE:

N1-OP-4, "Shutdown Cooling System" page 4. Ops. Tech. chapter 11 page 10.

[3.5/3.5]

295021A203 ..(KA's)

ANSWER: 095 (1.00)

b. or "d" facility comment accepted

REFERENCE:

N1-ARP-F3 page 5. N1-OP-5, "Control Rod Drive System" Note on page 38.

[3.7/3.9]

295022K301 ..(KA's)

ANSWER: 096 (1.00)

d.

REFERENCE:

NMP-1-EOP-5 "Secondary Containment Control" page 39.

[3.5/3.6]

295036A102 ..(KA's)

ANSWER: 097 (1.00)

a.

REFERENCE:

NMP-1-EOP-5, "Secondary Containment Control" page 6.

[3.8/4.1]

295034K301 ..(KA's)

(********** END OF EXAMINATION **********)

A N S W E R K E Y

MULTIPLE CHOICE

001 b

002 d

003 c

004 b

005 b

006 a

007 c

008 d

009 d

010 c

011 b or "d" facility comment accepted

012 d

013 b

014 d

015 b

016 c

017 a

018 b

019 MATCHING

a 1

b 5

c 3

d 7

MULTIPLE CHOICE

020 d

021 b

022 c

023 d

024 a

025 a

026 b

027 c

028 b

029 d

030 d

031 b or "d" facility comment accepted

032 c

033 a

034 d

035 b

036 a

A N S W E R K E Y

037	d
038	b
039	d
040	a
041	c
042	c or b" facility comment accepted
043	b
044	c
045	a
046	c
047	d
048	b
049	c
050	c
051	a
052	c
053	b
054	b
055	c
056	c
057	a
058	c
059	d
060	c
061	b
062	d
063	a
064	c
065	b
066	c
067	d
068	b
069	c
070	c
071	d
~~072~~	~~b~~ sct 6/29/92 Question deleted
073	d
074	c
075	a
076	c
077	d
078	b
079	a
080	d
081	a
082	c

A N S W E R K E Y

083 b

084 a

085 MATCHING

a 5

b 3

c 2

d 4

MULTIPLE CHOICE

086 d

087 b

088 d

089 c or "b" facility comment accepted

090 b

091 b

092 c

093 d

094 a

095 b or "d" facility comment accepted

096 d

097 a

(********** END OF EXAMINATION **********)

R O E x a m B W R R e a c t o r

O r g a n i z e d b y Q u e s t i o n N u m b e r

QUESTION	VALUE	REFERENCE
001	1.00	16432
002	1.00	16451
003	1.00	16681
004	1.00	16732
005	1.00	17474
006	1.00	17481
007	1.00	9000002
008	1.00	9000003
009	1.00	9000006
010	1.00	9000007
011	1.00	9000008
012	1.00	9000010
013	1.00	9000012
014	1.00	9000014
015	1.00	9000015
016	1.00	9000016
017	1.00	9000017
018	1.00	9000018
019	2.00	9000019
020	1.00	9000020
021	1.00	9000021
022	1.00	9000022
023	1.00	9000023
024	1.00	9000024
025	1.00	9000026
026	1.00	9000027
027	1.00	9000028
028	1.00	9000029
029	1.00	9000030
030	1.00	9000031
031	1.00	9000032
032	1.00	9000033
033	1.00	9000034
034	1.00	9000035
035	1.00	9000037
036	1.00	9000038
037	1.00	9000039
038	1.00	9000041
039	1.00	9000042
040	1.00	9000043
041	1.00	9000044
042	1.00	9000045
043	1.00	9000046
044	1.00	9000047
045	1.00	9000049
046	1.00	9000050

047	1.00	9000051
048	1.00	9000052
049	1.00	9000053

RO Exam BWR Reactor

Organized by Question Number

QUESTION	VALUE	REFERENCE	
050	1.00	9000056	
051	1.00	9000057	
052	1.00	9000059	
053	1.00	9000061	
054	1.00	9000062	
055	1.00	9000063	
056	1.00	9000064	
057	1.00	9000065	
058	1.00	9000066	
059	1.00	9000067	
060	1.00	9000068	
061	1.00	9000069	
062	1.00	9000070	
063	1.00	9000071	
064	1.00	9000072	
065	1.00	9000073	
066	1.00	9000074	
067	1.00	9000075	
068	1.00	9000076	
069	1.00	9000078	
070	1.00	9000082	
071	1.00	9000084	
~~072~~	~~1.00~~	~~9000085~~ 5/12/92 Deleted	
073	1.00	9000086	
074	1.00	9000088	
075	1.00	9000089	
076	1.00	9000092	
077	1.00	9000093	
078	1.00	9000094	
079	1.00	9000095	
080	1.00	9000097	
081	1.00	9000098	
082	1.00	9000099	
083	1.00	9000101	
084	1.00	9000102	
085	2.00	9000103	
086	1.00	9000104	
087	1.00	9000106	
088	1.00	9000107	
089	1.00	9000108	
090	1.00	9000110	
091	1.00	9000112	
092	1.00	9000113	
093	1.00	9000114	
094	1.00	9000115	
095	1.00	9000116	

096	1.00	9000117
097	1.00	9000118

99.00

99.00

R O Exam B W R Reactor

Organized by K A Group

PLANT WIDE GENERICS

QUESTION	VALUE	KA
007	1.00	294001A101
008	1.00	294001A101
018	1.00	294001A103
017	1.00	294001A104
012	1.00	294001A111
010	1.00	294001K102
014	1.00	294001K102
013	1.00	294001K102
011	1.00	294001K102
016	1.00	294001K103
015	1.00	294001K103
009	1.00	294001K105
PWG Total	12.00	

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
028	1.00	201001A105
029	1.00	201001G010
006	1.00	201001K203
036	1.00	201002K101
035	1.00	201002K406
046	1.00	206000K102
047	1.00	207000K108
019	2.00	209001K409
021	1.00	209001K611
042	1.00	211000A109
031	1.00	212000A304
032	1.00	212000A404
030	1.00	212000K412
024	1.00	215003A202
022	1.00	215003K401
023	1.00	215003K402
038	1.00	215004A407
002	1.00	218000A205
020	1.00	223001K112
048	1.00	223002K304
026	1.00	239002A407

027	1.00	239002K103
025	1.00	241000A203
045	1.00	261000G010
041	1.00	264000G009

R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
039	1.00	264000G010
040	1.00	264000K407
PS-I Total	28.00	

Group II

QUESTION	VALUE	KA
005	1.00	201003K402
034	1.00	201003K404
057	1.00	201006G004
058	1.00	201006K104
055	1.00	202001A302
056	1.00	202001G015
054	1.00	202001K107
044	1.00	204000A406
043	1.00	204000G010
049	1.00	205000A406
033	1.00	214000G008
062	1.00	215002G004
051	1.00	245000A301
052	1.00	245000K605
060	1.00	262001A303
061	1.00	263000K601
053	1.00	271000K401
063	1.00	272000K402
001	1.00	286000A105
PS-II Total	19.00	

Group III

QUESTION	VALUE	KA
050	1.00	215001K401
059	1.00	233000G010
004	1.00	234000K505
037	1.00	290002G014

PS-III Total	4.00
PS Total	51.00

R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

EMERGENCY PLANT EVOLUTIONS

Group I

QUESTION	VALUE	KA
088	1.00	295005K301
067	1.00	295006A101
066	1.00	295006K201
003	1.00	295007G003
068	1.00	295007K301
069	1.00	295009K101
070	1.00	295014A101
071	1.00	295015G011
076	1.00	295024K218
078	1.00	295025A107
077	1.00	295025A107
081	1.00	295031A204
082	1.00	295037K303
EPE-I Total	13.00	

Group II

QUESTION	VALUE	KA	
084	1.00	295001A106	
083	1.00	295001K104	
085	2.00	295002K202	
064	1.00	295003K206	
065	1.00	295003K303	
086	1.00	295004A102	
087	1.00	295004K203	
089	1.00	295008A108	
~~072~~	~~1.00~~	~~295016G002~~	Deleted
073	1.00	295016G006	
090	1.00	295018A101	
091	1.00	295019G010	
092	1.00	295019K217	
093	1.00	295020A101	
095	1.00	295022K301	
079	1.00	295026G008	
080	1.00	295030K301	
097	1.00	295034K301	
EPE-II Total	19.00		

Group III

QUESTION	VALUE	KA		

R O E x a m B W R R e a c t o r

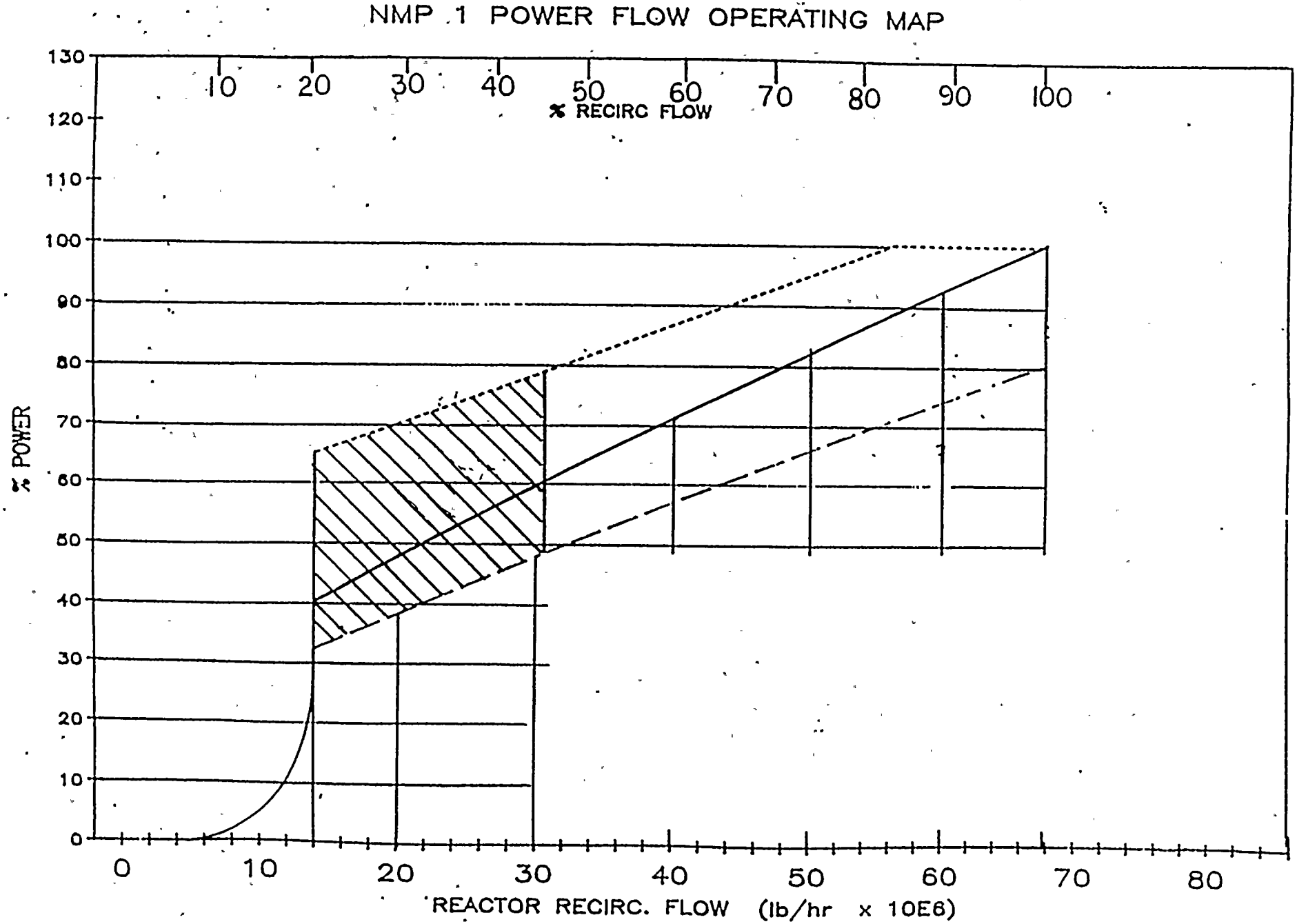
O r g a n i z e d b y K A G r o u p

EMERGENCY PLANT EVOLUTIONS

Group III

QUESTION	VALUE	KA
094	1.00	295021A203
074	1.00	295023A202
075	1.00	295023G007
096	1.00	295036A102
EPE-III Total	4.00	
EPE Total	36.00	
Test Total	~~99.00~~ 98.00	sid 7/2/92

Attachment 1



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"SRO"
Exam

Nuclear Regulatory Commission
Operator Licensing
Examination

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U. S. NUCLEAR REGULATORY COMMISSION
SITE SPECIFIC EXAMINATION
SENIOR OPERATOR LICENSE
REGION 1

CANDIDATE'S NAME: _____

FACILITY: Nine Mile Point 1

REACTOR TYPE: BWR-GE2

DATE ADMINISTERED: 92/06/08

INSTRUCTIONS TO CANDIDATE:

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. Points for each question are indicated in parentheses after the question. The passing grade requires a final grade of at least 80%. Examination papers will be picked up four (4) hours after the examination starts.

TEST VALUE	CANDIDATE'S SCORE	%	
~~99.0~~ 98.0 scl 7/2/92		%	TOTALS
	FINAL GRADE		

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

_____
Candidate's Signature

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

MULTIPLE CHOICE

001 a b c d ___
002 a b c d ___
003 a b c d ___
004 a b c d ___
005 a b c d ___
006 a b c d ___
007 a b c d ___
008 a b c d ___
009 a b c d ___
010 a b c d ___
011 a b c d ___
012 a b c d ___
013 a b c d ___
014 a b c d ___
015 a b c d ___
016 a b c d ___
017 a b c d ___
018 a b c d ___
019 a b c d ___

020 MATCHING

a ___
b ___
c ___
d ___

MULTIPLE CHOICE

021 a b c d ___
022 a b c d ___
023 a b c d ___
024 a b c d ___
025 a b c d ___
026 a b c d ___
027 a b c d ___
028 a b c d ___
029 a b c d ___
030 a b c d ___
031 a b c d ___
032 a b c d ___
033 a b c d ___
034 a b c d ___
035 a b c d ___
036 a b c d ___
037 a b c d ___

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

038	a	b	c	d	___	061	a	b	c	d	___
039	a	b	c	d	___	062	a	b	c	d	___
040	a	b	c	d	___	063	a	b	c	d	___
041	a	b	c	d	___	064	a	b	c	d	___
042	a	b	c	d	___	065	a	b	c	d	___
043	a	b	c	d	___	066	a	b	c	d	___
044	a	b	c	d	___	~~067~~	~~a~~	~~b~~	~~c~~	~~d~~	___ 5/11/98 Deleted
045	a	b	c	d	___	068	a	b	c	d	___
046	a	b	c	d	___	069	a	b	c	d	___
047	a	b	c	d	___	070	a	b	c	d	___
048	a	b	c	d	___	071	a	b	c	d	___
049	a	b	c	d	___	072	a	b	c	d	___
050	a	b	c	d	___	073	a	b	c	d	___
051	a	b	c	d	___	074	a	b	c	d	___
052	a	b	c	d	___	075	a	b	c	d	___
053	a	b	c	d	___	076	a	b	c	d	___
054	a	b	c	d	___	077	a	b	c	d	___
055	a	b	c	d	___	078	a	b	c	d	___
056	a	b	c	d	___	079	a	b	c	d	___
057	a	b	c	d	___	080	a	b	c	d	___
058	a	b	c	d	___	081	a	b	c	d	___
059	a	b	c	d	___	082	a	b	c	d	___
060	a	b	c	d	___	083	a	b	c	d	___

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

084	a	b	c	d	___
085	a	b	c	d	___
086	a	b	c	d	___
087	a	b	c	d	___
088	a	b	c	d	___
089	a	b	c	d	___
090	a	b	c	d	___
091	a	b	c	d	___
092	a	b	c	d	___
093	a	b	c	d	___
094	a	b	c	d	___
095	a	b	c	d	___
096	a	b	c	d	___
097	a	b	c	d	___
098	a	b	c	d	___

NRC RULES AND GUIDELINES FOR LICENSE EXAMINATIONS

During the administration of this examination the following rules apply:

1. Cheating on the examination means an automatic denial of your application and could result in more severe penalties.

2. After the examination has been completed, you must sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination. This must be done after you complete the examination.

3. Restroom trips are to be limited and only one applicant at a time may leave. You must avoid all contacts with anyone outside the examination room to avoid even the appearance or possibility of cheating.

4. Use black ink or dark pencil ONLY to facilitate legible reproductions.

5. Print your name in the blank provided in the upper right-hand corner of the examination cover sheet and each answer sheet.

6. Mark your answers on the answer sheet provided. USE ONLY THE PAPER PROVIDED AND DO NOT WRITE ON THE BACK SIDE OF THE PAGE.

7. Before you turn in your examination, consecutively number each answer sheet, including any additional pages inserted when writing your answers on the examination question page.

8. Use abbreviations only if they are commonly used in facility literature. Avoid using symbols such as < or > signs to avoid a simple transposition error resulting in an incorrect answer. Write it out.

9. The point value for each question is indicated in parentheses after the question.

10. Show all calculations, methods, or assumptions used to obtain an answer to any short answer questions.

11. Partial credit may be given except on multiple choice questions. Therefore, ANSWER ALL PARTS OF THE QUESTION AND DO NOT LEAVE ANY ANSWER BLANK.

12. Proportional grading will be applied. Any additional wrong information that is provided may count against you. For example, if a question is worth one point and asks for four responses, each of which is worth 0.25 points, and you give five responses, each of your responses will be worth 0.20 points. If one of your five responses is incorrect, 0.20 will be deducted and your total credit for that question will be 0.80 instead of 1.00 even though you got the four correct answers.

13. If the intent of a question is unclear, ask questions of the examiner only.

14. When turning in your examination, assemble the completed examination with examination questions, examination aids and answer sheets. In addition, turn in all scrap paper.

15. Ensure all information you wish to have evaluated as part of your answer is on your answer sheet. Scrap paper will be disposed of immediately following the examination.

16. To pass the examination, you must achieve a grade of 80% or greater.

17. There is a time limit of four (4) hours for completion of the examination.

18. When you are done and have turned in your examination, leave the examination area (EXAMINER WILL DEFINE THE AREA). If you are found in this area while the examination is still in progress, your license may be denied or revoked.

QUESTION: 001 (1.00)

The following plant conditions exist:

Automatic Depressurization System (ADS) is actuated
Reactor water level: -15 inches
All Core Spray (CS) pumps: running
120 second timer: timed out
3 ADS ERVs: open
Reactor pressure: 150 psig and decreasing

WHICH ONE of the following will cause the Automatic Depressurization System ERV's to close and remain closed without further operator action?

a. BOTH ADS Timer Reset Pushbuttons are depressed and released.

b. ONE ADS inhibit switch is placed in "INHIBIT".

c. Water level is raised above -10 inches.

d. Loss of 120VAC from power board 102 & 103 .

QUESTION: 002 (1.00)

While operating at 100% power, the Main Turbine Bypass and Control Valves fail open, causing the following events:

- RPV pressure decreases to 750 psig, reactor power decreases to 50% before the MSIVs begin closing
- After the MSIVs close, RPV pressure increases to 1380 psig before ERVs decrease pressure to about 1100 psig
- Reactor power spikes to 120% on APRMs before a scram decreases power to 0%
- RPV level decreases to a low of -5 inches before operators are able to restore level to normal

Which indicate the Safety Limits that have been exceeded?

a. RPV level and neutron flux limits.

b. RPV level and MCPR limits.

c. RPV pressure and MCPR limits.

d. RPV pressure and neutron flux limits.

QUESTION: 003 (1.00)

Which ONE of the following describes the operation/configuration of the backup scram valves?

a. Two valves in series normally energized, one valve will de-energize with each RPS channel tripping. Actuation of both is required to vent the air header.

b. Two valves in series, one powered from each RPS trip channel, either valve deenergizing will vent the scram air header.

c. Two valves in series, each requires both RPS channels tripped to energize, both valves must energize to vent the air header.

d. Two valves in series, both RPS channels must trip to energize either valve, one valve must energize to vent the air header.

QUESTION: 004 (1.00)

A Deviation Event Report (DER) which potentially affects Technical Specification compliance shall be:

a. hand carried to the DER coordinator and a copy faxed to the Station Shift Supervisor (SSS).

b. faxed to the SSS followed up by a telephone call, with the original sent by company mail.

c. sent by company mail after telephone notification to the SSS.

d. immediately telephoned to the SSS and hand carried to the DER coordinator.

QUESTION: 005 (1.00)

When performing a surveillance test in a contaminated area the operator shall have a procedure stamped:

a. "for information only" and "effective".

b. "controlled".

c. "controlled working copy".

d. "satellite master copy" and "controlled".

QUESTION: 006 (1.00)

Copies of procedures made from the "Master Copy" are being used in the field.

They must be reverified for accuracy against the "Master Copy":

a. every shift.

b. prior to each use.

c. every 48 hours.

d. every 72 hours.

QUESTION: 007 (1.00)

A "Type 1 Procedure Change Evaluation" (PCE) to a Site procedure is required.

Prior to implementation of the PCE or procedure the PCE shall be approved by an SRO:

a. from each unit.

b. from the issuing unit with notification to the other unit.

c. from each unit and the plant manager.

d. and the RPO from the issuing unit.

QUESTION: 008 (1.00)

During performance of a Surveillance Test (ST) a portion of the test fails to meet the acceptance criteria.

Which ONE of the following describes the required action?

a. The test must be considered a "no-test"

b. The test must be rerun in its entirety

c. The failed portion is immediately rerun and reviewed for final determination of acceptance

d. The remainder of the test may be accepted for Tech Spec credit provided it is not affected by the failed portion

QUESTION: 009 (1.00)

A photo badge that has the term "X-KEY" printed below the photo badge means the individual:

a. may obtain a vital area key from the control room without further authorization.

b. may authorize the issuing of vital area keys to plant personnel.

c. may enter a vital area in non-emergency situations without utilizing the card reader.

d. has a vital area key permanently assigned.

QUESTION: 010 (1.00)

Which ONE of the following is NOT required to provide authorization for the clearance of a temporary modification?

a. System Engineer

b. Station Shift Supervisor

c. Manager Technical Support

d. Chief Shift Operator

QUESTION: 011 (1.00)

A Control Room Annunciator is temporarily out of service due to a faulty input (temperature switch).

In addition to an entry in the Defeated Annunciator Log, this condition is recorded by a:

a. temporary modification tag on the input device and the annunciator window.

b. "markup" on the input device and a defeated annunciator sticker on the annunciator window.

c. temporary modification tag on the annunciator window.

d. "markup" on both the input device and annunciator window.

QUESTION: 012 (1.00)

The Foam Water Hose Reel System should be used to control and extinguish a fire:

a. in energized electrical equipment.

b. involving turbine lube oil.

c. involving liquified gases with boiling points below ambient temperatures.

d. caused by a hydrogen leak in the Main Generator.

QUESTION: 013 (1.00)

Unit 1 has implemented the Site Emergency Plan.

The duties of the Nine Mile Point Nuclear Station Site Emergency Director are immediately assumed by the:

a. Unit 1 SSS.

b. Unit 2 SSS.

c. Shift Emergency Plan Coordinator (SEPC).

d. Unit 1 ASSS.

QUESTION: 014 (1.00)

Switches or Valves tagged with a "Blue Markup" shall only be operated with the permission of the:

a. Controller.

b. Markup Man.

c. Chief Shift Operator.

d. Station Shift Supervisor.

QUESTION: 015 (1.00)

Which ONE of the following describes the requirements for performing minor maintenance to a component under the control of a "Blue Markup"?

a. A Red Markup is issued for that component and placed with the Blue Markup

b. The Blue Markup must be cleared and a Hold-Out issued

c. The maintenance may be performed under the Blue Markup after receiving permission from the SSS and Markup Man

d. A Hold-Out is issued and placed with the Blue Markup which allows the maintenance to be performed after receiving permission from the Markup Man

QUESTION: 016 (1.00)

A Red Markup which is to be cleared has an "OTHER" signed on who is not on site.

Which ONE of the following describes the requirements for clearing this Markup?

a. The "OTHER" must be contacted by telephone and give verbal concurrence to sign off

b. The "OTHER" must report to the site and personally sign off

c. The Station Shift Supervisor may sign off for the "OTHER" after noting it on the Markup

d. The Responsible Supervisor may take full responsibility for the "OTHER" on the Markup and sign off

QUESTION: 017 (1.00)

Work must be performed to maintain the reactor at power. The radiation field in the area is 400 mRem/hr fast neutron and 2.0 Rem/hr gamma. The worker assigned is 24 years old today, has a lifetime exposure through last quarter of 28 Rem on his NRC Form 4 and no recordable exposure for this quarter.

The maximum time this individual can stay in this area and not exceed his 10 CFR 20 exposure limits is:

a. 40 min.

b. 50 min.

c. 60 min.

d. 75 min.

QUESTION: 018 (1.00)

A High Radiation Area is defined as an area, where a major portion of the whole body could receive in 1 hour a dose in excess of:

a. 1 mRem but less than 10 mRem.

b. 10 mRem but less than 100 mRem.

c. 100 mRem but less than 1000 mRem.

d. 1000 mRem.

QUESTION: 019 (1.00)

A licensed reactor operator is required to work a 16 hour shift at the control board.

This operator should be periodically relieved of primary duties for a break period:

a. every 4 hours during the 16 hour period.

b. every 4 hours after 8 hours has been worked.

c. every 2 hours after 8 hours has been worked.

d. once after 8 hours has been worked.

QUESTION: 020 (2.00)

Following receipt of an initiation signal coincident with a 115 KV power failure, the core spray pumps will sequentially start.

Match the starting time delay in column B with the core spray pumps in column A.

The items from column B may be used once, more than once, or not at all and only a single answer may occupy one answer space.

	COLUMN A (Core Spray Pumps)	COLUMN B (Starting Time Delay)
a.____	Core spray pumps 111 and 112	1. 0 seconds
b.____	Core spray pumps 121 and 122	2. 3.0 seconds
c.____	Core spray topping pumps 111 and 112	3. 7.0 seconds
d.____	Core spray topping pumps 121 and 122	4. 10 seconds
		5. 13 seconds
		6. 15 seconds
		7. 20 seconds

QUESTION: 021 (1.00)

Both containment spray and core spray systems have received a valid initiation signal.

If the core spray pumps fail to start, the containment spray pumps will:

a. not start, because the time delay relay requires core spray initiation first.

b. all start, 10 seconds after the last core spray should have started.

c. start one set, 5 seconds after the first core spray should have started.

d. start one set, 50 seconds after the initiation signal was received.

QUESTION: 022 (1.00)

Following a small break LOCA the Automatic Depressurization System (ADS) fails to actuate. Reactor Pressure is stable at 330 psig with level at 0 inches.

Which ONE of the following describes the Core Spray Status?

a. Pumps have started but are not injecting because the inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have not opened

b. Pumps have started, inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have opened and the system is injecting

c. Pumps have not started and inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have not opened

d. Pumps have not started, but inside isolation valves, 40-01, 40-09, 40-10 and 40-11 have opened

QUESTION: 023 (1.00)

The "REFUEL INST TRIP BYPASS CH 11 AND 12" keylock switches on panel "M" are in the "NON-COINCIDENT" position during refueling. Welding in the drywell results in an "UPSCALE TRIP" on IRM 11.

The reactor protection system and reactor manual control systems will generate a:

a. half scram without a rod block.

b. half scram with a rod block.

c. full scram without a rod block.

d. full scram with a rod block.

QUESTION: 024 (1.00)

During Operation at 100% power with APRM channel 14 bypassed, IRM channel 16 fails downscale.

In accordance with NI-OP-38B, "Intermediate Range Monitor" the required action is:

a. bypass IRM channel 16.

b. bypass IRM channel 16 and insert a half-scram on RPS channel 11.

c. bypass IRM channel 16 and insert a half-scram on RPS channel 12.

d. bypass IRM channel 16 insert a half-scram on RPS channel 12 and impose a Control Rod Block.

QUESTION: 025 (1.00)

During operation at 100% power with APRM channel 15 bypassed, the other APRM in that same core quadrant fails downscale.

If the operator now places the second failed APRM Joystick to bypass:

a. both APRMs will be bypassed.

b. neither APRM will be bypassed.

c. only APRM channel 15 will be bypassed.

d. a RPS half-scram will result.

QUESTION: 026 (1.00)

During a power ascension with reactor power at 38% the Turbine Bypass Valves fail open. Reactor pressure remains stable in the normal band.

The operator should attempt to close the bypass valves by:

a. depressing the "Vacuum Trip #2" pushbutton.

b. decreasing the "Speed/Load Changer" setpoint.

c. operating the "Bypass Opening Jack Motor" in the closed direction.

d. shifting pressure control to the "Manual Pressure Regulator".

QUESTION: 027 (1.00)

During operation at 100% power an Electromatic Relief Valve (ERV) inadvertently opens and remains stuck open.

The operator is directed to check the status of the blue indicating light above the ERV control switches because this indicates:

a. actual valve position.

b. if the solenoid is energized.

c. the status of the acoustic monitor.

d. status of the tailpipe temperature element.

QUESTION: 028 (1.00)

During operation at 100% power a Reactor Safety Valve fails open.

In addition to changing Drywell parameters this would be indicated by:

a. an increased reactor vessel pressure due to turbine control valve closure.

b. an increased reactor vessel level due to increased steam flow sensed by the feedwater level control system.

c. a decreased steam flow signal sent to the feedwater control system due to steam flow through the safety valve.

d. an increased steam pressure signal sent to the main turbine control system to compensate for the decrease in steam line pressure.

QUESTION: 029 (1.00)

Which ONE of the following Reactor Protection System automatic scrams may be bypassed as a function of taking the mode switch from "RUN" to "STARTUP"?

a. Turbine Stop Valve Closure

b. Generator Load Reject

c. APRM Upscale Trip

d. Main Steam Line Isolation Valve Closure

QUESTION: 030 (1.00)

A loss of Reactor Trip Bus 131 has occurred. Upon restoration of power to Reactor Trip Bus 131 only three (3) of the WHITE Scram solenoid indicating lights for Reactor Trip Bus 131 are reenergized. All Reactor Trip Bus 141 side Scram indicating lights are energized.

Which ONE of the following describes the appropriate action?

a. Assume 1/4 of the control rods should have scrammed, initiate a manual scram and enter N1-SOP-1 Reactor Scram.

b. Assume 1/4 of the control rods have received a 1/2 scram, continue operations and investigate.

c. Momentarily insert and then reset an "A" side half scram to pick up the relay and energize the light.

d. If no control rods have scrammed, assume the light bulb is burned out and replace it.

QUESTION: 031 (1.00)

The CRD scram discharge volume high water level scram trip can be bypassed by its scram bypass switch if:

a. the mode switch is in RUN.

b. the mode switch is in SHUTDOWN only.

c. the mode switch is in REFUEL.

d. the mode switch is in STARTUP.

QUESTION: 032 (1.00)

During a scram from 100% power, which ONE of the following describes system response if the CRD Hydraulic Control Unit accumulator piston does NOT move?

NOTE: (Assume the accumulator is mechanically bound up.)

a. The control rod will fully insert using charging water pressure.

b. The control rod will insert until reactor and CRD pressures equalize.

c. The control rod will insert until the flow control valve opens.

d. The control rod will fully insert using reactor pressure.

QUESTION: 033 (1.00)

Which ONE of the following actions is specifically PROHIBITED as part of the attempts to recouple or move a stuck control rod?

a. Driving the rod full in.

b. Driving the rod full out.

c. Manually scramming the rod.

d. Increasing Drive pressure.

QUESTION: 034 (1.00)

The following conditions exist:

A fuel bundle is being raised from the core.
Neutron monitoring count rate is increasing.
No rod motion observed.

Which ONE of the following actions should be performed?

a. Continue withdrawing the fuel bundle, counts will eventually decrease.

b. Position the fuel bundle to the nearest safe location outside of the core.

c. Return the fuel bundle to the original location.

d. Stop all fuel movement.

QUESTION: 035 (1.00)

Which ONE of the following actions should be performed if power is lost to the Refuel Bridge during fuel bundle transit from the Spent Fuel Pool to the Core?

a. Immediately evacuate the upper drywell area.

b. Suspend all fuel handling and evacuate the refuel floor.

c. Immediately operate the manual controls to return the fuel bundle to its original location in the Spent Fuel Pool.

d. Consult the Reactor Engineering Representative to determine the nearest safe storage location.

QUESTION: 036 (1.00)

Which ONE of the following describes the MINIMUM required initial conditions for the Source Range Monitor (SRM) system in order to perform a reactor startup?

a. At least 3 SRM channels must be operable with detectors inserted far enough to provide a positive count rate of 3.0 CPS.

b. At least 3 SRM channels must be operable and fully inserted with at least 3.0 cps count rate.

c. All SRM channels must be operable with count rate of 3.0 cps or greater when the detector is fully inserted.

d. All SRM channels must be operable and fully inserted with at least 3 SRM channels equal to or greater than 3.0 CPS.

QUESTION: 037 (1.00)

What is the MAXIMUM emergency load allowed on the Emergency Diesel Generators in order to achieve safe shutdown conditions?

a. 1883 KW

b. 2560 KW

c. 2816 KW

d. 2945 KW

QUESTION: 038 (1.00)

When performing a Local Emergency Start of Diesel Generator (DG) 102/103, why is the Local/Remote switch left in REMOTE?

a. The generator field will not flash in LOCAL.

b. The DG will not start if the switch is left in LOCAL.

c. The control room will lose emergency shutdown capability.

d. The control room will lose output breaker control.

QUESTION: 039 (1.00)

Diesel Generator (DG) 102, fails to complete the start sequence in response to a manual start signal.

Which ONE of the following actions must be performed before DG 102 can be restarted?

a. Reset the governor overspeed trip mechanism.

b. Trip the 86 DG relays.

c. Push the 48X pushbutton in the diesel room control cabinet.

d. Place the control switch in STOP then back to START.

QUESTION: 040 (1.00)

Which ONE of the following may prevent Liquid Poison (LP) Pump 11 from injecting Boron to the reactor vessel if LP System 11 is initiated?

a. Explosive Valve 11 no continuity.

b. LP Pump 11 discharge accumulator vent valve open.

c. Test Tank to LP Pump 11 suction (LP-19) open.

d. LP System 12 injection in progress.

QUESTION: 041 (1.00)

Which ONE of the following will result in a Cleanup System automatic isolation?

a. Loss of continuity to Liquid Poison System Explosive valves.

b. Cleanup System Steam Leak area temperature of 180 degrees F.

c. Cleanup Pump discharge temperature of 130 degrees F.

d. Cleanup Pump system flow control valve drifts closed.

QUESTION: 042 (1.00)

Which ONE of the following provides the reason that one Reactor Building Emergency Ventilation System must be secured if the system is automatically initiated?

a. To ensure that the 10KW heater can reduce inlet humidity to meet design requirements.

b. To prevent excessive airflow which could damage the ductwork.

c. To prevent possible fan damage due to low air flow through one of the fans, if two fans are running.

d. To preclude excess contamination of both systems when only one is necessary by design.

QUESTION: 043 (1.00)

Feedwater (FW) pump #11 was operating in the HPCI mode when it automatically tripped on RPV high Level.

Which ONE of the following will allow restart of this pump?

a. Place FW pump 11 bias M/A station ID15 in MANUAL.

b. Press "FW Return to Normal After HPCI" channel pushbutton.

c. RPV water level decreases to the HPCI initiation setpoint.

d. Close FW pump 11 flow control valve.

QUESTION: 044 (1.00)

Which ONE of the following is a return for condensate from the Emergency Condenser System?

a. Recirc #11 discharge

b. Recirc #12 suction

c. Recirc #14 discharge

d. Recirc #15 suction

QUESTION: 045 (1.00)

Which ONE of the following will result in a loss of monitoring for drywell Hydrogen and Oxygen if no additional operator actions are taken?

a. Containment Atmospheric Dilution (CAD) channel 11 and 12 in "Bypass"

b. Containment pressure of 3.5 psig.

c. Stack monitors 11 and 12 upscale Hi-Hi trip.

d. Loss of power to the Post Accident Sample System.

QUESTION: 046 (1.00)

Which ONE of the following describes when the Shutdown Cooling System containment isolation valves 38-01, SDC SYSTEM IN IV SC-11 (INSIDE) and 38-02, SDC SYSTEM OUT IV SC-12 (OUTSIDE) can be opened?

a. One valve can be opened when pressure is above 120 psig provided the other valve is closed and no system isolation signals are present.

b. Neither valve can be opened unless pressure is below 120 psig and no system isolations are present.

c. One valve can be opened if pressure is above 120 psig provided the other valve is closed and temperature is less than 350 degrees F.

d. Both valves can be opened when pressure is above 120 psig if temperature is less than 350 degrees F.

QUESTION: 047 (1.00)

The following conditions exist:

APRM Channel 14 is bypassed.
APRM Channel 15 is failed down scale, is INOP and bypassed

How long will the plant be able to continue operating in this configuration? (assume no other APRMs are bypassed)

a. 24 hours or until the number of operable Channel 11/12 APRMS is less than two.

b. Until the next APRM surveillance that initiates an RPS trip.

c. Immediate shutdown is required.

d. Indefinitely.

QUESTION: 048 (1.00)

Under which ONE of the following conditions should the turbine be tripped if generator load is being reduced to restore vacuum?

a. Vacuum below 25 inches.

b. Load below 190 Mwe.

c. Bypass valves are open.

d. Load is below 40 Mwe.

QUESTION: 049 (1.00)

The Mechanical Vacuum Pumps may not be used to maintain main condenser vacuum during power operations.

Which ONE of the following provides the reason for this limitation?

a. The 1.75 minute Hold Up Pipe discharges into the stack downstream of the radiation monitor sample point.

b. The Hold Up Pipe is not designed to contain an explosion.

c. Without a particulate filter, the discharge at power would falsely indicate a high stack radiation gas levels.

d. The 1.75 minute Hold Up Pipe will not pass sufficient flow from both vacuum pumps, and one pump will not maintain vacuum.

QUESTION: 050 (1.00)

At what point in the starting sequence of a recirculation pump is the individual M/A controller placed in direct control of pump speed?

a. When the field breaker closes to excite the generator.

b. As the pump speed settles out at 20%.

c. When the discharge valve is open beyond 20%.

d. After the 30 second starting sequence relay times out.

QUESTION: 051 (1.00)

The 20% low power set point used to enable or disable the Rod Worth Minimizer constraints is sensed from:

a. steam flow.

b. feed flow.

c. steam and feed flow.

d. APRM power.

QUESTION: 052 (1.00)

In order to remain within the licensing basis, the Spent Fuel Pool water temperature must be maintained:

a. less than 125 degrees F.

b. above 50 degrees F.

c. between 70 degrees F. and 212 degrees F.

d. between 68 degrees F. and 123 degrees F.

QUESTION: 053 (1.00)

If offsite power is lost, loads are stripped from Power Boards 16B and 17B.

Which ONE of the following loads is NOT stripped if power is lost to Power Boards 16 and 17

a. Post Accident Sample System.

b. Instrument Air Compressor.

c. Liquid Poison Pumps.

d. Main Turbine Lift Pumps.

QUESTION: 054 (1.00)

Which ONE of the following describes the purpose of the APRM System rod block functions?

a. Ensure core coupling yeilds decreased rod worths.

b. Provide reactivity addition limits for a rod drop accident prior to reaching high flux scram setpoints.

c. Ensure that the Local Peaking Factor due to rod withdrawal does not exceed the average Total Peaking Factor.

d. Limit the gross power increase from control rod withdrawal so that MCPR is Maintained greater than Safety Limit Critical Power Ratio.

QUESTION: 055 (1.00)

During refueling operations, placing the Fuel Pool Keylock Switch on panel "G" in the "REFUEL" position will perform what function?

a. Aligns the Refuel Bridge High Range Radiation Monitor to the Reactor Building Emergency Ventilation initiation logic.

b. Aligns electrical power to the refuel bridge components.

c. Enables the refuel bridge interlocks and rod block circuitry.

d. Changes the setpoint of the refuel floor high radiation alarm to that specified for handling spent fuel.

QUESTION: 056 (1.00)

One of the subsequent steps taken following a Station Blackout is to vent Hydrogen Gas from the Main Generator .

Which ONE of the following is the Bases for this step?

a. Damage to the generator seals will result from high hydrogen pressure caused by loss of cooling

b. Turbine building ventilation is not available to prevent Hydrogen gas pocket buildups

c. The emergency seal oil pump must be secured to preserve adequate battery capacity

d. The emergency seal oil pump is powered from vital AC and is not available

QUESTION: 057 (1.00)

The Load Shedding associated with a station blackout will provide a Station Battery Reserve of:

a. 4 hours.

b. 8 hours.

c. 12 hours.

d. 24 hours.

QUESTION: 058 (1.00)

Following an automatic Reactor Scram the Rector Mode Switch is first taken to "SHUTDOWN" prior to going to "REFUEL".

The reason for going to "SHUTDOWN" first is:

a. to ensure all channels of the Reactor Protection System (RPS) trip.

b. to bypass the Main Steam Isolation Valve low pressure closure.

c. to ensure the Scram Discharge Volume vent and drain valves close.

d. to insert the mode switch scram (redundant scram signal).

QUESTION: 059 (1.00)

The Emergency Cooling System automatically actuates on a Low-Low Reactor Vessel Water Level of +5 inches sustained for 12 seconds.

The reason for automatically actuating on a low-low reactor water level signal is to:

a. insert negative reactivity in the event the reactor has not scrammed.

b. assist in depressurization on a small break, loss of coolant accident.

c. provide flow through the core after the recirculation pumps trip.

d. reduce the cooldown transient the reactor vessel is subjected to following automatic depressurization system actuation.

QUESTION: 060 (1.00)

Operation with reactor vessel level below the low level alarm setpoint will cause excessive "Steam Carryunder".

Which ONE of the following is a result of "Steam Carryunder"?

a. Increase in moisture carryover in the steam

b. Increase in core flow

c. Decrease in recirculation pump net positive suction head

d. Decrease in SLCPR

QUESTION: 061 (1.00)

The High Drywell Pressure, Containment Isolation signal can be bypassed with the "NITROGEN PURGE BYPASS SWITCHES ON "L" panel, in all REACTOR MODE SWITCH EXCEPT:

a. RUN

b. STARTUP/HOT STANDBY

c. REFUEL

d. SHUTDOWN

QUESTION: 062 (1.00)

While operating in N1-EOP-4, "Primary Containment Control", the operator is directed to perform an emergency RPV depressurization when plant conditions "cannot be maintained below the Heat Capacity Temperature Limit (HCTL)".

What are TWO of the plant conditions that must be evaluated to make this decision?

a. Torus water level and torus pressure

b. Drywell pressure and average drywell temperature

c. Torus level and drywell pressure

d. RPV pressure and torus temperature

QUESTION: 063 (1.00)

A Reactor Scram and Main Steam Isolation Valve Closure from 100% power has occurred.

In which ONE of the following Torus operating conditions does Technical Specifications require reactor depressurization to less than 200 psig at normal cooldown rates?

a. Downcomer submergence is less than 3 feet

b. Downcomer submergence is greater than 4 feet

c. Torus pool temperature is 112 degrees F.

d. Torus pool temperature is 123 degrees F.

QUESTION: 064 (1.00)

A loss of Feedwater Heating has occurred which results in a temperature decrease of 102 degrees F.

A required immediate operator action is to:

a. reduce recirculation flow to less than 36 Mlbs/hr.

b. insert the required "CRAM" rods to the 80% rod line.

c. scram the reactor.

d. trip the turbine.

QUESTION: 065 (1.00)

The Reactor Thermal Limit most severely challenged by a Loss of Feedwater Heating is:

a. Minimum Critical Power Ration (MCPR).

b. Average Planer Linear Heat Generation Rate (APLHGR).

c. Linear Heat Generation Rate (LHGR).

d. Maximum Total Peaking Factor (MTPF).

QUESTION: 066 (1.00)

After a Reactor Scram which ONE of the following conditions require entry into N1-EOP-3, "Failure to Scram"?

a. One rod "green background light" not illuminated all remaining rods have "green background lights" illuminated.

b. One rod "green background light" illuminated with no readout, all remaining rods have "green background lights" illuminated with 00 indicated.

c. All rods inserted to position 02

d. One rod at position 04 remaining rods at position 00

QUESTION: 067 (1.00)

Which ONE of the following is a required operator action prior to performing a control room evacuation?

a. Transfer house loads

b. Activate the emergency plan and declare an ALERT

c. Scram the reactor

d. Sound the station alarm and announce the evacuation.

QUESTION: 068 (1.00)

The CONTROL TRANSFER SWITCH for Emergency Cooling Steam Isolation Valve, 39-08 has inadvertently been placed in "EMER" at the Remote Shutdown Panel (RSP).

Which ONE of the following describes the affect this has on valve operation?

a. The valve can only be operated from the RSP

b. The valve can be operated from both the Control Room (CR) and RSP with for all functions still available from both locations

c. The valve will not function from either location until the RSP is powered up

d. The valve can be operated from the CR and RSP however, "Pull to Stop" will not function from the CR

QUESTION: 069 (1.00)

An initial operator action in EOP-6, Radioactive Release Control, directs the operator to restart the Turbine Building Ventilation, if it is shutdown.

The Bases for this step is to:

a. filter the air in the turbine building before release to the environment.

b. maintain temperature conditions in the turbine building to prevent limitations on personnel access.

c. maintain temperature conditions in the turbine building to prevent vital equipment damage.

d. provide an elevated monitored release point and prevent limitations on personnel access to the turbine building.

QUESTION: 070 (1.00)

During refueling, with the Spent Fuel Pool in communication with the Reactor Cavity, the pool level is observed to be decreasing.

Which ONE of the following is the LEAST preferred makeup method to restore level?

a. Core Spray with suction from the Torus

b. Control Rod Drive pumps

c. Fire water via the feedwater system

d. Condensate system

QUESTION: 071 (1.00)

During a plant cooldown it is necessary to maintain the suction and discharge valves of at least two Reactor Recirculation Loops open to:

a. ensure that reactor vessel level indication equals water level inside shroud.

b. prevent thermal stratification of water inside the vessel.

c. ensure a flowpath through the reactor vessel to maintain water clarity.

d. ensure a natural circulation flowpath for ambient decay heat removal.

QUESTION: 072 (1.00)

N1-EOP-4, "Primary Containment Control" directs the operator to vent the Primary Containment before Drywell Pressure reaches the Drywell Pressure Limit.

The vent path utilized is determined by:

a. Torus pressure.

b. Torus level.

c. Drywell temperature.

d. expected offsite radioactive release rate.

QUESTION: 073 (1.00)

N1-EOP-4, "Primary Containment Control" utilizes 12 psig as the "Suppression Chamber Spray Initiation Pressure".

This pressure limit is utilized to:

a. prevent "chugging" in the downcomers.

b. ensure a positive margin to the negative drywell pressure limit.

c. prevent operation of the reactor building to torus vacuum breakers.

d. ensure 100% of the noncondensables are transferred to the torus.

QUESTION: 074 (1.00)

A faulted high reactor pressure signal has satisfied the ATWS-ARI logic. The operator immediately places the key locked switch on the "F" Panel from "NORMAL" to "INTERRUPT".

Which ONE of the following describes the effect this has on the ATWS-ARI initiation logic?

a. The logic will be overridden after the 25 second timer resets

b. The logic will immediately be overridden

c. Once the logic has initiated the key locked switch has no effect

d. It enables the ATWS "LOV RESET" pushbutton which must be actuated to override the logic

QUESTION: 075 (1.00)

Whenever heat from relief valve testing is being added to the Suppression Pool, the pool temperature shall be monitored and logged every:

a. 5 minutes

b. 10 minutes

c. 15 minutes

d. 30 minutes

QUESTION: 076 (1.00)

Operation in the "GOOD" area of the Heat Capacity Temperature Limit Curve will NOT preclude which ONE of the following from occurring?

a. Loss of primary containment integrity

b. Failure of "safe shutdown" equipment located in the primary containment

c. Exceeding the Boron injection temperature limit

d. Loss of the "pressure suppression function" of primary containment

QUESTION: 077 (1.00)

If Torus water level cannot be maintained above 8.0 feet, why must ERVs be verified closed?

This minimum level is chosen because; below this level:

a. insufficient volume of water remains to absorb the reactor coolant system energy.

b. the heat addition will cause an insufficient NPSH for the ECCS pumps.

c. the primary containment vents will be uncovered.

d. a direct pressurization of the torus air space will result.

QUESTION: 078 (1.00)

Which ONE of the following combinations of RPV water levels and injection systems meets the criteria for "Adequate Core Cooling," with the reactor depressurized?

a. -50 inches with no injection systems running

b. -85 inches with one loop of core spray injecting

c. -100 with both loops of core spray injecting

d. -120 inches with 3 ERVs open and containment spray raw water injecting via core spray

QUESTION: 079 (1.00)

During implementation of EOP-3, "Failure to Scram" RPV water level is lowered to:

a. increase the natural circulation flow, enhancing the boron mixing.

b. increase the steam generation rate, reducing power.

c. reduce the natural circulation driving head, increasing voids.

d. reduce the volume of water therefore, decreasing the amount of boron required.

QUESTION: 080 (1.00)

After the liquid poison system is initiated, boron injection continues until:

a. 850 gallons has been injected.

b. the entire contents of the liquid poison tank have been injected.

c. reactor power decreases below 6%.

d. the "hot shutdown boron weight" has been added.

QUESTION: 081 (1.00)

During operation, an inadvertent trip of one reactor recirculation pump places the unit in the "Restricted Zone" of the Power Flow Operating Map, without causing thermal hydraulic instability.

The operator should exit the "Restricted Zone" by:

a. restarting the tripped pump.

b. lowering reactor power below 80% rodline by inserting "CRAM" rods.

c. decreasing reactor power with recirculation flow.

d. immediately scramming the reactor.

QUESTION: 082 (1.00)

Following the trip of one reactor recirculation pump, thermal hydraulic instability is indicated by:

a. periodic LPRM upscale alarms.

b. periodic LPRM downscale alarms.

c. power oscillations greater than 5% of rated on the APRMs.

d. flux oscillations greater than 10% on the LPRMs

QUESTION: 083 (1.00)

Following a loss of power on 125 VDC Battery Board 11 the alternate 125 VDC control power is supplied to Diesel Generator (DG) 102.

Which ONE of the following describes the effect this will have on Diesel Generator 102?

a. There is no effect on DG operation after the alternate 125 VDC control power is supplied

b. The DG will automatically start but the output breaker must be closed remotely

c. The diesel can be started but local-manual speed control must be utilized

d. The DG can be started and brought up to speed but local-manual operation must be utilized for the output breaker

QUESTION: 084 (1.00)

Which ONE of the following Motor Generator (MG) sets can be used to charge the 125 VDC batteries, but does NOT satisfy the Technical Specification LCO for vital battery operability?

a. Reactor tripping power MG set 141

b. Battery Charging MG set 161

c. Computer supply MG set 167

d. Continuous power MG set 172

QUESTION: 085 (1.00)

A loss of 24 VDC Bus 11 will result in:

a. tripping the stack blocking valve.

b. initiation of reactor building emergency ventilation system.

c. a reactor scram if the "MODE" switch is in run.

d. closing the containment vent and purge valves.

QUESTION: 086 (1.00)

The reason a turbine trip with reactor power above 45% results in a direct reactor scram is:

a. above this power the EPR cannot respond fast enough to prevent a reactor high pressure scram.

b. the loss of extraction steam to the feedwater heaters would result in a high neutron flux scram.

c. that is the maximum energy removal capacity of the bypass valves.

d. above this power level a Turbine trip without bypass may cause the MCPR to be lower than SLPR.

QUESTION: 087 (1.00)

Following a transient, reactor vessel level increases to the feed pump high level trip setpoint. The operator is directed to restart the feedpumps and regain level control.

Which ONE of the following describes the actions necessary to regain vessel level control.

a. Allow level to decrease 10 inches below the high level trip setpoint, and restart the pumps manually.

b. Place the high level trip bypass switch in "Bypass" and allow the pumps to restart automatically.

c. Place the high level trip bypass switch in "Bypass" and restart the pumps manually.

d. 10 seconds after level decreases below the high level trip setpoint, restart the pumps manually.

QUESTION: 088 (1.00)

N1-EOP-4, "Primary Containment Control" requires an Emergency RPV Depressurization, if Drywell temperature cannot be maintained below 300 degrees F.

Which ONE of the following is NOT a Bases for this temperature limit?

a. This is the maximum temperature indication which is available in the control room

b. Above this temperature the torus to drywell vacuum breakers cannot keep up with the depressurization from steam condensation.

c. This is the drywell design temperature.

d. This is the maximum temperature to which the automatic depressurization valves (ADS) are qualified to.

QUESTION: 089 (1.00)

Following a loss of Service Water the operator is unable to place the Emergency Service Water System (ESW) in service.

The operator is directed to supply Fire Water for cooling, directly to the:

a. emergency condensers.

b. reactor building closed loop cooling heat exchangers.

c. instrument air compressor intercoolers.

d. main turbine lube oil tank coolers.

QUESTION: 090 (1.00)

During two pump, three heat exchanger operation of the Reactor Building Closed Loop Cooling (RBCLC) system it is necessary to secure one heat exchanger for maintenance.

Which ONE of the following configurations should the operator shift the RBCLC system to?

a. Three pump, two heat exchanger operation

b. Two pump one heat exchanger operation

c. Two pump, two heat exchanger operation with RBCLC temperature control valve, TCV 70-137 limited to 30% max open position

d. Two pump, two heat exchanger operation with RBCLC temperature control valve, TCV 70-137 full open

QUESTION: 091 (1.00)

Following a loss of instrument air, CRD instrument air pressure is decreasing.

A manual reactor scram is required when CRD instrument air pressure decreases below:

a. 50 psig.

b. 60 psig.

c. 70 psig.

d. 80 psig

QUESTION: 092 (1.00)

With Reactor Feedwater operating in the HPCI mode, a loss of instrument air occurs.

The Feedwater Flow Control Valves, ID12A and ID12B will:

a. fail open.

b. fail closed.

c. fail as is.

d. continue to respond because of backup accumulator supplies.

QUESTION: 093 (1.00)

A high Drywell pressure of 3.7 psig will initiate a:

a. primary coolant isolation (vessel isolation).

b. main steam system isolation.

c. reactor water cleanup system isolation.

d. core spray pump discharge test line isolation.

QUESTION: 094 (1.00)

Which ONE of the following signals will result in an automatic closure of both Shutdown Cooling system isolation valves, 38-01 and 38-02.

a. Reactor vessel level less than +5 inches

b. Reactor vessel pressure greater than 120 psig

c. Reactor vessel temperature greater than 350 degrees F.

d. Reactor recirculation pump 14 isolated

QUESTION: 095 (1.00)

A failure of both Control Rod Drive (CRD) Pumps requires a reactor scram because of a loss of :

a. cooling water.

b. charging water.

c. CRD pump coolant injection.

d. drive flow.

QUESTION: 096 (1.00)

Which ONE of the following systems would be isolated after entry into EOP-5, "Secondary Containment Control," if it were discharging into an area with a floor drain sump level exceeding its alarm point?

a. Core spray

b. Control rod drive

c. Fire water

d. Reactor water cleanup

QUESTION: 097 (1.00)

If Reactor Building (RB) Ventilation exhaust radiation level exceeds 5 mR/hr while executing EOP-5,"Secondary Containment Control" the operator is directed to verify RB ventilation isolates.

Which ONE of the following is the reason for that step?

a. Terminate release of radioactivity to the environment

b. Ensure personnel access to the RB is not precluded

c. This is the maximum safe operating level of the ventilation system

d. Maintain a positive reactor building pressure with respect to atmosphere

QUESTION: 098 (1.00)

Operation of the Rod Worth Minimizer (or human RWM) below 20% power is required to:

a. prevent selection of a control rod which could allow individual control rods to have greater than acceptable reactivity worth.

b. prevent control rod drop accidents.

c. limit or prevent fuel damage from a continuous rod withdrawal accident.

d. limit control rod reactivity addition in the event that rod worth is higher than expected.

(********** END OF EXAMINATION **********)

ANSWER: 001 (1.00)

d.

REFERENCE:

ADS Ops Tech Ch 15, rev 4, pg 8 & 9 & 12 and fig 15-3

[3.4/3.6]

218000A205 ..(KA's)

ANSWER: 002 (1.00)

c.

REFERENCE:

Technical Specification, 2.1. 01-LOT-008-362-1-01, Objective EO 2.1

[3.4/4.2]

295007G003 ..(KA's)

ANSWER: 003 (1.00)

a.

REFERENCE:

CRD System Ops Tech Ch 5, rev 5, pg 14 and fig 5a

[3.5/3.6]

201001K203 ..(KA's)

ANSWER: 004 (1.00)

b.

REFERENCE:

NIP-ECA-01, "Deviation Event Reporting" page 9.

[4.2/4.2]

294001A102 ..(KA's)

ANSWER: 005 (1.00)

c.

REFERENCE:

NIP-PRO-01, Use of Procedures" page 3.

[2.9/3.4]

294001A101 ..(KA's)

ANSWER: 006 (1.00)

d.

REFERENCE:

NIP-PRO-01, Use of Procedures" page 6.

[2.9/3.4]

294001A101 ..(KA's)

ANSWER: 007 (1.00)

a.

REFERENCE:

NIP-PRO-04, "Procedure Change Evaluation" page 5.

[3.6/4.2]

294001A110 ..(KA's)

ANSWER: 008 (1.00)

d.

REFERENCE:

AP-5.2.1, "Surveillance Test and Inspection Program" page 10. EO-9.0

[4.2/4.2]

294001A102 ..(KA's)

ANSWER: 009 (1.00)

d.

REFERENCE:

NIP-SEC-02, General Security Requirements" page 4. NIP-SEC-01, "Protected/Vital Area Access page 5.

[3.2/3.7]

294001K105 ..(KA's)

ANSWER: 010 (1.00)

c.

REFERENCE:

AP-6.1, "Control of Equipment Temporary Modifications" page 9 EO-4.0

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 011 (1.00)

b.

REFERENCE:

AP-6.1, "Control of Equipment Temporary Modifications" page 10. EO-8.0

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 012 (1.00)

b.

REFERENCE:

N1-OP-21B, "Fire Protection System- Foam Water"page 5. Lesson Plan 01-LOT-001-286-02 Objective 1

[3.5/3.8]

294001K116 ..(KA's)

ANSWER: 013 (1.00)

a.

REFERENCE:

GAP-OPS-01, "Administration of Operations" page 29.

[2.9/4.7]

294001A116 ..(KA's)

ANSWER: 014 (1.00)

b.

REFERENCE:

GAP-OPS-02, "Control of Equipment Markups" page 1.

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 015 (1.00)

c.

REFERENCE:

GAP-OPS-02, "Control of Equipment Markups" page 1.

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 016 (1.00)

d.

REFERENCE:

GAP-OPS-02, "Control of Equipment Markups" page 16.

[3.9/4.5]

294001K102 ..(KA's)

ANSWER: 017 (1.00)

b.

REFERENCE:

10 CFR 20
400 + 2000= 2400 mRem/hr 5X(N-18)= 30 Rem 30-28= 2 Rem (2000 Mrem)
2000/2400=.833 hours = 50 minutes

[3.3/3.8]

294001K103 ..(KA's)

ANSWER: 018 (1.00)

c.

REFERENCE:

S-RAP-RPP-0103, "Posting Radiological Areas" page 3.

[3.3/3.8]

294001K103 ..(KA's)

ANSWER: 019 (1.00)

b.

REFERENCE:

Technical Specification 6.2.2.h. 01-LOT-1-006-343-02 page 12 EO-18

[2.7/3.7]

294001A103 ..(KA's)

ANSWER: 020 (2.00)

a. 1

b. 5

c. 3

d. 7

REFERENCE:

Operations Technology Chapter 17, Core Spray page 16. EO.8

[3.3/3.5]

209001K409 ..(KA's)

ANSWER: 021 (1.00)

d.

REFERENCE:

Operations Technology Chapter 17, Core Spray page 17.

[3.5/3.6]

223001K112 ..(KA's)

ANSWER: 022 (1.00)

b.

REFERENCE:

Operations Technology Chapter 17 Core Spray page 1.

[3.6/3.7]

209001K611 ..(KA's)

ANSWER: 023 (1.00)

d.

REFERENCE:

NI-OP-38B, "Intermediate Range Monitor" page 2.

[4.0/4.0]

215003K402 ..(KA's)

ANSWER: 024 (1.00)

a.

REFERENCE:

NI-OP-38B, "Intermediate Range Monitor" page 5.

[3.5/3.7]

215003A202 ..(KA's)

ANSWER: 025 (1.00)

c.

REFERENCE:

N1-OP-38C, "Local Power Range Monitors (LPRM) Average Power Range Monitors (APRM)" page 5.

[3.4/3.4]

215005A405 ..(KA's)

ANSWER: 026 (1.00)

a.

REFERENCE:

N1-OP-31, "Tandem Compound Reheat Turbine" page 33

[4.1/4.2]

241000A203 ..(KA's)

ANSWER: 027 (1.00)

b.

REFERENCE:

N1-OP-1 "Nuclear Steam Supply System (NSSS)" pages 11 and 25.

[3.6/3.6]

239002A407 ..(KA's)

ANSWER: 028 (1.00)

c. or "a" facility comment accepted

REFERENCE:

Operations Technology Chapter 27 page 2. Chapter 21 Main Steam System page 3.

[3.5/3.6]

239002K103 ..(KA's)

ANSWER: 029 (1.00)

d.

REFERENCE:

RPS Ops Tech Ch 10, rev 4, pg 7

[3.9/4.1]

212000K412 ..(KA's)

ANSWER: 030 (1.00)

b.

REFERENCE:

RPS Ops Tech Ch 10, rev 4,
CHECK RPS TERMINOLOGY WITH FACILITY

[3.9/3.8]

212000A304 ..(KA's)

ANSWER: 031 (1.00)

c.

REFERENCE:

RPS Ops Tech Ch 10, rev 4, pg 7

[3.9/3.9]

212000A404 ..(KA's)

ANSWER: 032 (1.00)

d.

REFERENCE:

CRD Ops Tech Ch 5a, rev 5, pg 13

[3.6/3.7]

201003K404 ..(KA's)

ANSWER: 033 (1.00)

c.

REFERENCE:

CRD System Operation Procedure N1-OP-5 rev 28, pg 36, "CAUTION"

[3.7/3.8]

201003A202 ..(KA's)

ANSWER: 034 (1.00)

d.

REFERENCE:

Refueling N1-OP-34 rev 11, pg 28, H.2.1.3.
NRC IEN 88-21

[3.3/3.1]

290002G014 ..(KA's)

ANSWER: 035 (1.00)

d.

REFERENCE:

Refueling N1-OP-34 rev 11, pg 27, H.1.0

[2.8/3.1]

234000A203 ..(KA's)

ANSWER: 036 (1.00)

b.

REFERENCE:

SRM Operating Procedure N1-OP-38A rev 12, pg 5, item F
T/S 3.5.1. pg 180
SRM Ops Tech Ch 9a, rev 4, pg 11, table 9a-6, rod blocks

[3.4/3.6]

215004A407 ..(KA's)

ANSWER: 037 (1.00)

d.

REFERENCE:

Emergency DG Operating Procedure N1-OP-45 pg 5
House Service N1-OP-30 rev 11, pg 29, "CAUTION" and pg 6, D.4.0

[3.2/3.6]

264000G010 ..(KA's)

ANSWER: 038 (1.00)

a.

REFERENCE:

Emergency DG N1-OP-45 rev 20, pg 6 bottom para, pg 20 H4 & H5

[3.3/3.4]

264000K407 ..(KA's)

ANSWER: 039 (1.00)

c.

REFERENCE:

Emergency DG N1-OP-45 rev 20, pg 8, D.3.0

[3.8/3.9]

264000G009 ..(KA's)

ANSWER: 040 (1.00)

c.

REFERENCE:

LP System Ops Tech Ch 8, rev 5
LP System N1-OP-12 rev 21

[4.0/4.1]

211000A109 ..(KA's)

ANSWER: 041 (1.00)

d.

REFERENCE:

RWCU system Ops Tech Ch 7 rev 4, pg 15

[3.6/3.6]

204000K404 ..(KA's)

ANSWER: 042 (1.00)

a.

REFERENCE:

RB HVC System Operation Procedure N1-OP-10 rev 10, pg 7, item 7

[3.1/3.3]

261000G010 ..(KA's)

ANSWER: 043 (1.00)

c.

REFERENCE:

FWC System Ops Tech Ch 23b rev1, pg 11
FAC question 7, TRAIN Q151 and FAC question 6, TRAIN Q150

[4.0/4.1]

206000K102 ..(KA's)

ANSWER: 044 (1.00)

d.

REFERENCE:

EC System Ops Tech Ch 14 rev 7, fig 14-1

[3.0/3.2]

207000K108 ..(KA's)

ANSWER: 045 (1.00)

b.

REFERENCE:

Drywell Inerting and CAD Ops Tech Ch 12b rev 2, pg 12
FAC QUESTION 28, TRAIN Q379

[3.3/3.5]

223002K304 ..(KA's)

ANSWER: 046 (1.00)

a.

REFERENCE:

SDC System Ops Tech Ch 20a rev 5, pg 4, D.4.0

[3.6/3.6]

205000K101 ..(KA's)

ANSWER: 047 (1.00)

d.

REFERENCE:

FAC QUESTION 55, TRAIN Q 518 (almost verbatim)
Tech Spec 3.6.2

[3.3/4.2]

215005G005 ..(KA's)

ANSWER: 048 (1.00)

b.

REFERENCE:

Turbine N1-OP-31 rev 14, pg 20, D.1, D.3.

[3.5/3.6]

245000A203 ..(KA's)

ANSWER: 049 (1.00)

b.

REFERENCE:

CAR and OFF-Gas N1-OP-25 rev 16, pg 8, D.4.0

[3.1/3.2]

271000G010 ..(KA's)

ANSWER: 050 (1.00)

c.

REFERENCE:

Recirculation Ops Tech Ch 4 rev 4, pg 15 & 16

[3.1/3.0]

202001A302 ..(KA's)

ANSWER: 051 (1.00)

c.

REFERENCE:

RWM N1-OP-37 rev 13, pg 3, B. 2nd para.

[3.1/3.2]

201006K104 ..(KA's)

ANSWER: 052 (1.00)

d.

REFERENCE:

Refueling N1-OP-34 rev 11, pg 9, D.1

[2.8/2.9]

233000G010 ..(KA's)

ANSWER: 053 (1.00)

c.

REFERENCE:

House Service N1-Op-30 rev 11, pg 3, B.1

[3.4/3.5]

262001A303 ..(KA's)

ANSWER: 054 (1.00)

d.

REFERENCE:

T/S Bases for 3.6.3. pg 237a

[3.3/3.4]

215002G004 ..(KA's)

ANSWER: 055 (1.00)

a.

REFERENCE:

Refueling N1-OP-34 rev 11, pg 22, F, NOTE

[3.7/4.1]

272000K402 ..(KA's)

ANSWER: 056 (1.00)

c.

REFERENCE:

NI-SOP-18 "Station Blackout" pages 3&4.

[3.4/3.5]

295003K206 ..(KA's)

ANSWER: 057 (1.00)

b.

REFERENCE:

NI-SOP-18 "Station Blackout" page 4.

[3.5/3.6]

295003K303 ..(KA's)

ANSWER: 058 (1.00)

d.

REFERENCE:

NI-SOP-1 "Reactor Scram" page 1. OPS/438 Chapter 10, RPS page 12

[4.2/4.2]

295006A101 ..(KA's)

ANSWER: 059 (1.00)

b.

REFERENCE:

OP Tech Chapter 14 page 2. NI-OP-13, "Emergency Cooling System" page 3.

[3.3/3.5]

295031A109 ..(KA's)

ANSWER: 060 (1.00)

c.

REFERENCE:

Ops Tech Chapter 3 page 6.

[2.7/2.9]

295009K101 ..(KA's)

ANSWER: 061 (1.00)

c.

REFERENCE:

Ops Tech Chapter 11 pages 10 and 13.

[2.6/2.8/]

295010K204 ..(KA's)

ANSWER: 062 (1.00)

d.

REFERENCE:

N1-EOP-4 "Primary Containment Control"

[3.6/4.2]

295013G012 ..(KA's)

ANSWER: 063 (1.00)

d.

REFERENCE:

Technical Specification 3.3.2.f

[3.3/4.2]

295013G003 ..(KA's)

ANSWER: 064 (1.00)

c.

REFERENCE:

NI-SOP-2, "Unexplained Reactor Power Change" page 1.

[4.0/4.1]

295014A101 ..(KA's)

ANSWER: 065 (1.00)

a.

REFERENCE:

Check at Facility; N1-RPSP-11, "Fuel Integrity Monitoring" not provided.

[3.7/4.2]

295014K105 ..(KA's)

ANSWER: 066 (1.00)

d.

REFERENCE:

N1-EOP-3, "Failure to Scram" entry conditions.

[4.2/4.4]

295015G011 ..(KA's)

ANSWER: 067 (1.00)

b.

REFERENCE:

N!-SOP-9, "Control Room Evacuation" page 1

[3.1/4.5]

295016G002 ..(KA's)

ANSWER: 068 (1.00)

d.

REFERENCE:

N1-SOP-9 "Control Room Evacuation" page 9. OPS Tech Chapter 14 page 14.

[4.1/4.1]

295016G006 ..(KA's)

ANSWER: 069 (1.00)

d.

REFERENCE:

NMP1-EOP-6, "Radioactivity Release Control" bases page 5.

[3.3/3.5]

295017K302 ..(KA's)

ANSWER: 070 (1.00)

c.

REFERENCE:

N1-SOP-20, "Reported or Observed Loss of Spent Fuel Pool/Reactor Cavity Inventory" page 3.

[3.4/3.7]

295023A202 ..(KA's)

ANSWER: 071 (1.00)

a.

REFERENCE:

N1-OP-34, "Refueling Procedure" page 9.

[2.9/3.6]

295023G007 ..(KA's)

ANSWER: 072 (1.00)

b.

REFERENCE:

NMP1-EOP-4, "Primary Containment Control" Bases page 53.

[3.5/4.0]

295024K307 ..(KA's)

ANSWER: 073 (1.00)

a.

REFERENCE:

NMP1-EOP-4, "Primary Containment Control" Bases page 39.

[3.7/4.1]

295024K308 ..(KA's)

ANSWER: 074 (1.00)

b.

REFERENCE:

NI-OP-40, "Reactor Protection and ATWS system pag2 9.

[4.1/4.1]

295025A107 ..(KA's)

ANSWER: 075 (1.00)

a.

REFERENCE:

Technical Specification 4.3.2 page 130.

[3.6/4.5]

295026G008 ..(KA's)

ANSWER: 076 (1.00)

c.

REFERENCE:

NMP1-EOP-4 Primary Containment Control Bases page 16.

[3.8/4.1]

295026K301 ..(KA's)

ANSWER: 077 (1.00)

d.

REFERENCE:

NMP1-EOP-4, "Primary Containment Control" Bases page 56.

[3.8/4.1]

295030K301 ..(KA's)

ANSWER: 078 (1.00)

a.

REFERENCE:

NMP1-EOP-2, "RPV Control" Bases page 38.

[4.6/4.8]

295031A204 ..(KA's)

ANSWER: 079 (1.00)

c.

REFERENCE:

NMP1-EOP-3 "Failure to Scram" Bases page 21.

[4.1/4.5]

295037K303 ..(KA's)

ANSWER: 080 (1.00)

b.

REFERENCE:

NMP1-EOP-3, "Failure to Scram" Step RQ-24.

[4.3/4.4]

295037A203 ..(KA's)

ANSWER: 081 (1.00)

b.

REFERENCE:

N1-SOP-13, "Unexplained Reactor Power Changes" page 2.

[2.5/3.3]

295001K104 ..(KA's)

ANSWER: 082 (1.00)

a.

REFERENCE:

N1-SOP-13, "Unexplained Reactor Power Changes" page 1.

[3.3/3.4]

295001A106 ..(KA's)

ANSWER: 083 (1.00)

d.

REFERENCE:

N1-OP-47A, "125 VDC Power System" page 15.

[3.8/4.1]

295004A102 ..(KA's)

ANSWER: 084 (1.00)

c.

REFERENCE:

N1-OP-48, "Motor Generator Sets" page 10 P&L 10.0.

[3.1/3.9]

295004G003 ..(KA's)

ANSWER: 085 (1.00)

b.

REFERENCE:

N1-OP-47B, "24 VDC Power System" page 10.

[3.3/3.3]

295004K203 ..(KA's)

ANSWER: 086 (1.00)

d.

REFERENCE:

N1-OP-31, "Tandem Compound Reheat Turbine" page 3. N1-SOP-4, "Turbine Trip" page 1.

[3.8/3.8]

295005K301 ..(KA's)

ANSWER: 087 (1.00)

c.. or "b" facility comment accepted

REFERENCE:

N1OP-16 "Feedwater System Booster Pump To Reactor" pages 8 and 30.

[3.5/3.5]

295008A108 ..(KA's)

ANSWER: 088 (1.00)

b.

REFERENCE:

NMP1-EOP-4 "Primary Containment Control" page 24.

[3.3/3.5]

295012G007 ..(KA's)

ANSWER: 089 (1.00)

b.

REFERENCE:

N1-SOP-7, "Service Water Failure" page 1.

[3.3/3.4]

295018A101 ..(KA's)

ANSWER: 090 (1.00)

c.

REFERENCE:

N1-OP-11, Reactor Building Closed Loop Cooling System," page 4.

[3.2/3.4]

295018G007 ..(KA's)

ANSWER: 091 (1.00)

b.

REFERENCE:

N1-SOP-6.1, "Instrument Air Failure" page 1.

[3.7/3.4]

295019G010 ..(KA's)

ANSWER: 092 (1.00)

c.

REFERENCE:

N1-SOP-6.1, Instrument Air Failure" page 2

[2.7/2.7]

295019K217 ..(KA's)

ANSWER: 093 (1.00)

d.

REFERENCE:

N1-SOP-17, Vessel/Containment Isolation" page 4. Operations Technology Chapter 11 page 11.

[3.6/3.6]

295020A101 ..(KA's)

ANSWER: 094 (1.00)

a.

REFERENCE:

N1-OP-4, "Shutdown Cooling System" page 4. Ops. Tech. chapter 11 page 10.

[3.5/3.5]

295021A203 ..(KA's)

ANSWER: 095 (1.00)

b. or "d" facility comment accepted

REFERENCE:

N1-ARP-F3 page 5. N1-OP-5, "Control Rod Drive System" Note on page 38.

[3.7/3.9]

295022K301 ..(KA's)

ANSWER: 096 (1.00)

d.

REFERENCE:

NMP-1-EOP-5 "Secondary Containment Control" page 39.

[3.5/3.6]

295036A102 ..(KA's)

ANSWER: 097 (1.00)

a.

REFERENCE:

NMP-1-EOP-5, "Secondary Containment Control" page 6.

[3.8/4.1]

295034K301 ..(KA's)

ANSWER: 098 (1.00)

a.

REFERENCE:

RWM N1-OP-37 rev 13 pg 2, 6.B, First Sentence.

[3.4/3.4]

201006G004 ..(KA's)

A N S W E R K E Y

MULTIPLE CHOICE

001 d
002 c
003 a
004 b
005 c
006 d
007 a
008 d
009 d
010 c
011 b
012 b
013 a
014 b
015 c
016 d
017 b
018 c
019 b

020 MATCHING

a 1
b 5
c 3
d 7

MULTIPLE CHOICE

021 d
022 b
023 d
024 a
025 c
026 a
027 b
028 c or a facility comment accepted
029 d
030 b
031 c
032 d
033 c
034 d
035 d
036 b
037 d

A N S W E R K E Y

038	a	061	c
039	c	062	d
040	c	063	d
041	d	064	c
042	a	065	a
043	c	066	d
044	d	~~067 b~~ 5cd c1c9lc	question deleted from exam, facility comment accepted.
045	b	068	d
046	a	069	d
047	d	070	c
048	b	071	a
049	b	072	b
050	c	073	a
051	c	074	b
052	d	075	a
053	c	076	c
054	d	077	d
055	a	078	a
056	c	079	c
057	b	080	b
058	d	081	b
059	b	082	a
060	c	083	d

A N S W E R K E Y

084 c

085 b

086 d

087 c or b facility comment accepted

088 b

089 b

090 c

091 b

092 c

093 d

094 a

095 b or d facility comment accepted

096 d

097 a

098 a

(********** END OF EXAMINATION **********)

S R O Exam B W R Reactor

O r g a n i z e d b y Q u e s t i o n N u m b e r

QUESTION	VALUE	REFERENCE
001	1.00	16451
002	1.00	16681
003	1.00	17481
004	1.00	9000001
005	1.00	9000002
006	1.00	9000003
007	1.00	9000004
008	1.00	9000005
009	1.00	9000006
010	1.00	9000007
011	1.00	9000008
012	1.00	9000009
013	1.00	9000011
014	1.00	9000012
015	1.00	9000013
016	1.00	9000014
017	1.00	9000015
018	1.00	9000016
019	1.00	9000018
020	2.00	9000019
021	1.00	9000020
022	1.00	9000021
023	1.00	9000023
024	1.00	9000024
025	1.00	9000025
026	1.00	9000026
027	1.00	9000027
028	1.00	9000028
029	1.00	9000031
030	1.00	9000032
031	1.00	9000033
032	1.00	9000035
033	1.00	9000036
034	1.00	9000039
035	1.00	9000040
036	1.00	9000041
037	1.00	9000042
038	1.00	9000043
039	1.00	9000044
040	1.00	9000045
041	1.00	9000048
042	1.00	9000049
043	1.00	9000050
044	1.00	9000051
045	1.00	9000052
046	1.00	9000054

047	1.00	9000055
048	1.00	9000058
049	1.00	9000060

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y Q u e s t i o n N u m b e r

QUESTION	VALUE	REFERENCE	
050	1.00	9000063	
051	1.00	9000066	
052	1.00	9000067	
053	1.00	9000068	
054	1.00	9000070	
055	1.00	9000071	
056	1.00	9000072	
057	1.00	9000073	
058	1.00	9000075	
059	1.00	9000077	
060	1.00	9000078	
061	1.00	9000079	
062	1.00	9000080	
063	1.00	9000081	
064	1.00	9000082	
065	1.00	9000083	
066	1.00	9000084	
~~067~~	~~1.00~~	~~9000085~~	Deleted Sut 7/12/92
068	1.00	9000086	
069	1.00	9000087	
070	1.00	9000088	
071	1.00	9000089	
072	1.00	9000090	
073	1.00	9000091	
074	1.00	9000094	
075	1.00	9000095	
076	1.00	9000096	
077	1.00	9000097	
078	1.00	9000098	
079	1.00	9000099	
080	1.00	9000100	
081	1.00	9000101	
082	1.00	9000102	
083	1.00	9000104	
084	1.00	9000105	
085	1.00	9000106	
086	1.00	9000107	
087	1.00	9000108	
088	1.00	9000109	
089	1.00	9000110	
090	1.00	9000111	
091	1.00	9000112	
092	1.00	9000113	
093	1.00	9000114	
094	1.00	9000115	
095	1.00	9000116	

096	1.00	9000117	
097	1.00	9000118	
098	1.00	9000119	------

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 99.00
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 99.00
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S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

PLANT WIDE GENERICS

QUESTION	VALUE	KA
006	1.00	294001A101
005	1.00	294001A101
008	1.00	294001A102
004	1.00	294001A102
019	1.00	294001A103
007	1.00	294001A110
013	1.00	294001A116
010	1.00	294001K102
015	1.00	294001K102
016	1.00	294001K102
014	1.00	294001K102
011	1.00	294001K102
018	1.00	294001K103
017	1.00	294001K103
009	1.00	294001K105
012	1.00	294001K116
PWG Total	16.00	

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
043	1.00	206000K102
044	1.00	207000K108
020	2.00	209001K409
022	1.00	209001K611
040	1.00	211000A109
030	1.00	212000A304
031	1.00	212000A404
029	1.00	212000K412
036	1.00	215004A407
025	1.00	215005A405
047	1.00	215005G005
001	1.00	218000A205
021	1.00	223001K112
045	1.00	223002K304
027	1.00	239002A407
028	1.00	239002K103
026	1.00	241000A203

042	1.00	261000G010
053	1.00	262001A303
039	1.00	264000G009
037	1.00	264000G010

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
038	1.00	264000K407
PS-I Total	23.00	

Group II

QUESTION	VALUE	KA
003	1.00	201001K203
051	1.00	201006K104
050	1.00	202001A302
041	1.00	204000K404
046	1.00	205000K101
054	1.00	215002G004
024	1.00	215003A202
023	1.00	215003K402
035	1.00	234000A203
048	1.00	245000A203
049	1.00	271000G010
055	1.00	272000K402
PS-II Total	12.00	

Group III

QUESTION	VALUE	KA
033	1.00	201003A202
032	1.00	201003K404
052	1.00	233000G010
034	1.00	290002G014
PS-III Total	4.00	
PS Total	39.00	

EMERGENCY PLANT EVOLUTIONS

Group I

QUESTION	VALUE	KA
056	1.00	295003K206

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

EMERGENCY PLANT EVOLUTIONS

Group I

QUESTION	VALUE	KA		
057	1.00	295003K303		
058	1.00	295006A101		
002	1.00	295007G003		
060	1.00	295009K101		
061	1.00	295010K204		
063	1.00	295013G003		
062	1.00	295013G012		
064	1.00	295014A101		
065	1.00	295014K105		
066	1.00	295015G011		
~~067~~	~~1.00~~	~~295016G002~~	SUI 7/21/92 Deleted	
068	1.00	295016G006		
069	1.00	295017K302		
070	1.00	295023A202		
071	1.00	295023G007		
072	1.00	295024K307		
073	1.00	295024K308		
074	1.00	295025A107		
075	1.00	295026G008		
076	1.00	295026K301		
077	1.00	295030K301		
059	1.00	295031A109		
078	1.00	295031A204		
080	1.00	295037A203		
079	1.00	295037K303		
EPE-I Total	~~26.00~~ 25.00		SUI 7/21/92	

Group II

QUESTION	VALUE	KA		
082	1.00	295001A106		
081	1.00	295001K104		
083	1.00	295004A102		
084	1.00	295004G003		
085	1.00	295004K203		
086	1.00	295005K301		
087	1.00	295008A108		
088	1.00	295012G007		
089	1.00	295018A101		

090	1.00	295018G007
091	1.00	295019G010
092	1.00	295019K217
093	1.00	295020A101

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

EMERGENCY PLANT EVOLUTIONS

Group II

QUESTION	VALUE	KA
094	1.00	295021A203
095	1.00	295022K301
097	1.00	295034K301
096	1.00	295036A102
EPE-II Total	17.00	
EPE Total	43.00	
Test Total	~~99.00~~ 98.00	5/11 7/2/92

Attachment 3

Facility Comments and NRC Resolution

Facility Comment: RO Question: 11

A Control Room Annunciator is temporarily out of service due to a faulty input (temperature switch).

In addition to an entry in the Defeated Annunciator Log, this condition is recorded by a:

a. temporary modification tag on the input device and the annunciator window.

b. "markup" on the input device and a defeated annunciator sticker on the annunciator window.

c. temporary modification tag on the annunciator window.

d. "markup" on both the input device and annunciator window.

*ANSWER
b.

*REFERENCE
GAP-OPS-02, Rev. 00

Facility Recommendation: Both answers (b) and (d) be accepted as correct in accordance with the referenced procedure.

NRC Response: Comment accepted. Answer key will be changed accordingly.

Facility Comment: RO Question: 12

Which ONE of the following is a responsibility of the Chief Shift Operator (CSO) without obtaining further approvals?

a. Order the override of engineered safety features (ESFs)

b. Order actions which depart from Technical Specifications to protect the health and safety of the public

c. Order installation of jumpers in accordance with the Emergency Operating Procedures

d. Order the reactor shutdown when an operating parameter is exceeded

Attachment 3 (cont'd)

*ANSWER
d.
*REFERENCE
GAP-OPS-01, "Administration of Operations" page 8, section 3.1.6.j.

Facility Recommendation: Both answers (c) and (d) be accepted as correct in accordance with the referenced procedure.

NRC Response: Comment NOT Accepted. The CSO's authority is clearly stated in GAP-OPS-01 and "d" is the only acceptable answer in accordance with this procedure.

Facility Comment: RO Question: 31

A loss of Reactor Trip Bus 131 has occurred. Upon restoration of power to Reactor Trip Bus 131 only three (3) of the WHITE Scram solenoid indicating lights for Reactor Trip Bus 131 are reenergized. All Reactor Trip Bus 141 side Scram indicating lights are energized.

Which ONE of the following describes the appropriate action?

a. Assume 1/4 of the control rods should have scrammed, initiate a manual scram and enter N1-SOP-1 Reactor Scram.

b. Assume 1/4 of the control rods have received a 1/2 scram, continue operations and investigate.

c. Momentarily insert and then reset an "A" side half scram to pick up the relay and energize the light.

d. If no control rods have scrammed, assume the light bulb is burned out and replace it.

*ANSWER
b.
*REFERENCE
RPS Ops Tech Ch 10, rev 4,

Facility Recommendation: Both answers (b) and (d) be accepted as correct per the referenced training material.

NRC Response: Comment Accepted. Answer key will be changed accordingly.

Attachment 3 (cont'd)

Facility Comment: SRO Question: 28

During operation at 100% power a Reactor Safety Valve fails open.

In addition to changing Drywell parameters this would be indicated by:

a. an increased reactor vessel pressure due to turbine control valve closure.

b. an increased reactor vessel level due to increased steam flow sensed by the feedwater level control system.

c. a decreased steam flow signal sent to the feedwater control system due to steam flow through the safety valve.

d. an increased steam pressure signal sent to the main turbine control system to compensate for the decrease in steam line pressure.

*ANSWER
c.
*REFERENCE
N1-OP-31, Rev 14, page 3.

Facility Recommendation: Both answers (a) and (c) be accepted as correct in accordance with the procedure.

NRC Response: Comment Accepted. Answer key will be changed accordingly.

Facility Comment: RO Question: 37 / SRO Question: 34

The following conditions exist:

A fuel bundle is being raised from the core.
Neutron monitoring count rate is increasing.
No rod motion observed.

Which ONE of the following actions should be performed?

a. Continue withdrawing the fuel bundle, counts will eventually decrease.

b. Position the fuel bundle to the nearest safe location outside of the core.

c. Return the fuel bundle to the original location.

d. Stop all fuel movement.

Attachment 3 (cont'd)

*ANSWER
d.
*REFERENCE
Refueling N1-OP-34 rev 11, pg 28, H.2.1.3.
NRC IEN 88-21

Facility Recommendation: Both answers (a) and (c) be accepted as correct.

NRC Response: Comment NOT Accepted. The procedure guidance for inadvertent criticality states that refueling should be suspended. If the fuel bundle is lowered back into the reactor core the problem could be aggravated .

Facility Comment: RO Question: 72 / SRO Question: 67

Which ONE of the following is a required operator action prior to performing a control room evacuation?

a. Transfer house loads

b. Activate the emergency plan and declare an ALERT

c. Scram the reactor

d. Sound the station alarm and announce the evacuation.

*ANSWER
b.
*REFERENCE
N1-SOP-9, "Control Room Evacuation" page 1

Facility Recommendation: answers (a), (b), and (c) be accepted as correct in accordance with the reference procedure.

NRC Response: Comment Accepted. The question will be deleted from the examination.

Attachment 3 (cont'd)

Facility Comment: RO Question: 89 / SRO Question: 87

Following a transient, reactor vessel level increases to the feed pump high level trip setpoint. The operator is directed to restart the feedpumps and regain level control.

Which ONE of the following describes the actions necessary to regain vessel level control.

a. Allow level to decrease 10 inches below the high level trip setpoint, and restart the pumps manually.

b. Place the high level trip bypass switch in "Bypass" and allow the pumps to restart automatically.

c. Place the high level trip bypass switch in "Bypass" and restart the pumps manually.

d. 10 seconds after level decreases below the high level trip setpoint, restart the pumps manually.

*ANSWER
c.
*REFERENCE
N1-OP-16 "Feedwater System Booster Pump To Reactor" pages 8 and 30.

Facility Recommendation: Both answers (b) and (c) be accepted as correct in accordance with the referenced procedure.

NRC Response: Comment Accepted. Answer key will be changed accordingly.

Facility Comment: RO Question: 95 / SRO Question: 95

A failure of both Control Rod Drive (CRD) Pumps requires a reactor scram because of a loss of :

a. cooling water.

b. charging water.

c. CRD pump coolant injection.

d. drive flow.

*ANSWER
b.

Attachment 3 (cont'd)

*REFERENCE
N1-ARP-F3 page 5. N1-OP-5, "Control Rod Drive System" Note on page 38.

Facility Recommendation: Both answers (b) and (d) be accepted as correct in accordance with the referenced material.

NRC Response: Comment Accepted. Answer key will be changed accordingly.

Facility Comment: RO Question: 42

Which ONE of the following may prevent Liquid Poison (LP) Pump 11 from injecting Boron to the reactor vessel if LP System 11 is initiated?

a. Explosive Valve 11 no continuity.

b. LP Pump 11 discharge accumulator vent valve open.

c. Test Tank to LP Pump 11 suction (LP-19) open.

d. LP System 12 injection in progress.

*ANSWER
c.
*REFERENCE
LP System Ops Tech Ch 8, rev 5
LP System N1-OP-12 rev 21

Facility Recommendation: Both answers (b) and (c) be accepted as correct in accordance with the referenced procedure.

NRC Response: Comment Accepted. Answer key will be changed accordingly.

Attachment 4

SIMULATION FACILITY REPORT

Facility License: DPR-63

Facility Docket No.: 50-220

Operating Tests Administered on: June 9, 1992

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed.

ITEM	DESCRIPTION

There were no observations of simulator deficiencies.

Attachment 5

Licensee Personnel

J. Firlit	Vice President, Nuclear Support
K. Dahlberg	Plant Manager, NMP1
R. Sanaker	General Supervisor, Operations Training NMP1
B. Bandla	General Supervisor, Operations NMP1
R. Tessier	Manager, Operations NMP1
J. Stewart	Supervisor, Operations Training
B. Murtha	Station Shift Supervisor
R. McCoy	Senior Operations Training Instructor
S. Burton	Senior Operations Training Instructor
A. Pinter	Site Licensing Engineer
A. Curran	Site Licensing Engineer
J. April	Operations Training Instructor
G. Hartranft	Operations Training Instructor

NRC Personnel

S. Hansell	Operations Engineer, Chief Examiner
T. Fish	Senior Operations Engineer
M. Parrish	Examiner, EG&G