U. S. NUCLEAR REGULATORY COMMISSION

REGION I

DOCKET/REPORT NO:	50-410/96-08 (OL)
LICENSEE:	Niagara Mohawk Power Corporation
FACILITY:	Nine Mile Point Nuclear Station, Unit 1 Syracuse, New York 13212
DATES:	July 8-12, 1996
EXAMINERS:	C. Sisco, Operations Engineer M. Parrish, NRC Consultant Examiner D. Prawdzik, NRC Consultant Examiner

CHIEF EXAMINER: Carl Sisco 7/30/96

Carl Sisco, Operations Engineer
Operator Licensing and
Human Performance Branch
Division of Reactor Safety

Date

APPROVED BY: Glenn W. Meyer 8/6/96

Glenn W. Meyer, Chief
Operator Licensing and
Human Performance Branch
Division of Reactor Safety

Date

EXAMINATION SUMMARY

Operations:

Initial examinations were administered to two senior reactor operator (SRO) instant applicants and three reactor operator (RO) applicants during the period of July 8 - 12, 1996, at the Nine Mile Point Nuclear Station, Unit 2. One of the RO applicants failed the written portion of the examination. The other applicants passed all portions of the examination. The facility staff provided high-quality comments during the examination review process and as a result, no changes were made to the examination. The examiner noted that the RO applicants were generally weak in the use of refueling procedures.

The facility was not attentive concerning attention to detail in the development and use of some procedures. Also, the examiner determined that alternate shutdown cooling FSAR wording was consistent with the plant requirements necessary to establish alternate shutdown cooling.

Report Details

I. Operations

O5 Operator Training and Qualifications

O5.1 Operator Initial Examinations

a. Scope

The NRC administered initial examinations to two senior reactor operator (SRO) instant applicants and three reactor operator (RO) applicants. The examinations were administered in accordance with NUREG-1021, "Examiner Standards," Revision 7.

b. Examination Results

The results of the examinations are summarized below:

	SRO Pass/Fail	RO Pass/Fail
Written	2/0	2/1
Operating	2/0	3/0
Overall	2/0	2/1

The facility reviewed the written examinations during the week of June 17, 1996. The simulator scenarios and job performance measures (JPMs) were validated during the week of June 17, 1996, on the facility's simulator and in the plant. The facility staff who were involved with these reviews signed security agreements to ensure that the initial examinations were not compromised. The facility staff provided high quality comments during the review that resulted in no changes to the examination following the administration of the written examination.

No generic strengths were specifically identified during the simulator portion of the examination. One generic weakness was identified during the walk-through examination. Specifically, the RO applicants were not proficient in the use of procedures concerning the conduct of refueling operations.

c. Additional Findings

During the examination validation process, the following enhancements were made to the facility procedures. The facility submitted a procedure change request to modify each of the procedures listed below.

N2-SOP-31, "Loss of Shutdown Cooling," Rev. 00 - The procedure was modified to require the LPCI injection valve breakers to be opened prior to lifting and landing electrical leads during some off-normal plant conditions.

N2-SOP-03, "Loss of AC Power," Rev. 3 - Procedure Step D.1.5.1 referenced the incorrect Steps D.5.5 and D.9.5 instead of the correct Steps D.5.0 and D.9.0.

N2-SOP-101D, "Rapid Power Reduction," Rev. 00 - The procedure was modified to clarify the use of cram rods during a rapid power reduction concurrent with a loss of feedwater heating.

The examiners concluded that these procedure enhancements indicated that the licensee was not attentive concerning the need of attention to detail in the development and use of these procedures.

Review of FSAR Commitments

A recent discovery of a licensee operating their facility in a manner contrary to the FSAR description highlighted the need for a special focused review that compares plant practices, procedures, and/or parameters to the FSAR descriptions.

The examiners reviewed Section 5.4.7.1.1 of the final safety analysis report (FSAR) concerning alternate shutdown cooling. The FSAR stated that a sufficient number of safety relief valves (SRVs) must be opened to establish alternate shutdown cooling. The examiners reviewed Procedure N2-SOP-31, "Loss of Shutdown Cooling," Rev. 00, which required at least two SRVs be opened, with other SRVs opened as necessary to establish a flow rate of 7450 gpm. Based on a review of engineering documents, the examiners determined that this flow rate was sufficient to assure adequate alternate shutdown cooling. Also, the examiners determined the facility had properly accounted for the time needed to make all necessary system valve manipulations to assure that the reactor could be cooled down within the 36-hour time guidelines of Regulation Guide 1.139. Based on this review, the examiners determined that alternate shutdown cooling FSAR wording was consistent with the plant requirements necessary to establish alternate shutdown cooling.

In addition, the establishment and control of alternate shutdown cooling, using the plant referenced simulator, was a part of the initial examination process. All applicants who tested successfully demonstrated the ability to establish alternate shutdown cooling using Procedure N@-SOP-32, "Loss of Shutdown Cooling Rev. 00.

d. Conclusions

One of the RO applicants failed the written portion of the examination, and the remaining four applicants passed and were issued licenses. The facility staff provided high-quality comments during the examination review process and as a result, no changes were made to the examination. The examiners noted that the RO applicants were generally weak in the use of refueling procedures.

The facility was not attentive concerning attention to detail in the development and use of some procedures. Also, the examiners determined that alternate shutdown cooling FSAR wording was consistent with the plant requirements necessary to establish alternate shutdown cooling.

V. Management Meetings

X1 Exit Meeting Summary.

At the conclusion of the examination, the examiners discussed their observations of the examination process with members of the facility. The personnel present at the exit included the following:

LIST OF PERSONS CONTACTED

Licensee Personnel

R. Tessier	Manager Nuclear Training
R. Slade	General Supervisor Operations Training

U. S. Nuclear Regulatory Commission

C. Sisco	Operations Engineer
B. Norris	Sr. Resident Inspector
T. Beltz	Resident Inspector

Attachments:
1. RO Examination and Answer Key
2. SRO Examination and Answer Key
3. Simulation Facility Report

ATTACHMENT 3

SIMULATION FACILITY REPORT

Facility License: NPF-69

Facility Docket No: 50-410

Operating Test Preparation and Administration: July 8-12, 1996

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 noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information that 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, no items were observed.

ITEM	DESCRIPTION
CNMT TA04/07	Condensate and condensate booster pumps "A" bearing temperatures indicate high following pump starts.
CNMT TA21/36	

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

CANDIDATE'S NAME: _____

FACILITY: Nine Mile Point 2

REACTOR TYPE: BWR-GE5

DATE ADMINISTERED: 96/07/09

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	%
100.00	_____	___ % 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 K E Y

MULTIPLE CHOICE

001	b
002	c
003	a
004	b
005	a
006	d
007	d.
008	c
009	b
010	a
011	a
012	b
013	d
014	b
015	a.
016	c
017	a
018	d
019	b
020	b
021	a
022	b
023	b
024	d
025	c
026	~~a~~ d (E)
027	a
028	d
029	d
030	a
031	d
032	c
033	b
034	b
035	b
036	a
037	d
038	d
039	b
040	c
041	c
042	d
043	b
044	a
045	b

A N S W E R K E Y

046 a

MULTIPLE CHOICE

047 c
048 d
049 c
050 a
051 b
052 d
053 a
054 b
055 d
056 d
057 d
058 b
059 a
060 c
061 c
062 b
063 c
064 a
065 b
066 a
067 a
068 c
069 d
070 c
071 a
072 c
073 d
074 b
075 d
076 b
077 d
078 a
079 c
080 a
081 a
082 d
083 c
084 b
085 a
086 b
087 c
088 b
089 b
090 a

A N S W E R K E Y

091 b

MULTIPLE CHOICE

092 b

093 a

094 c

095 a

096 c

097 d

098 c

099 a

100 d

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

RO Exam BWR Reactor

Organized by Question Number

QUESTION	VALUE	REFERENCE
001	1.00	9000001
002	1.00	9000002
003	1.00	9000003
004	1.00	9000007
005	1.00	9000008
006	1.00	9000009
007	1.00	9000011
008	1.00	9000013
009	1.00	9000014
010	1.00	9000015
011	1.00	9000018
012	1.00	9000019
013	1.00	9000020
014	1.00	9000023
015	1.00	23972
016	1.00	9000025
017	1.00	9000026
018	1.00	9000028
019	1.00	9000029
020	1.00	9000030
021	1.00	9000031
022	1.00	9000032
023	1.00	9000033
024	1.00	9000035
025	1.00	9000036
026	1.00	9000037
027	1.00	9000038
028	1.00	9000039
029	1.00	9000040
030	1.00	9000042
031	1.00	9000044
032	1.00	9000045
033	1.00	9000047
034	1.00	9000048
035	1.00	9000049
036	1.00	9000050
037	1.00	9000051
038	1.00	9000052
039	1.00	9000053
040	1.00	9000054
041	1.00	9000055
042	1.00	9000056
043	1.00	9000057
044	1.00	9000058
045	1.00	9000059
046	1.00	9000060
047	1.00	29303
048	1.00	9000062
049	1.00	9000063

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	9000064
051	1.00	9000065
052	1.00	9000066
053	1.00	9000067
054	1.00	23950
055	1.00	23961
056	1.00	9000071
057	1.00	9000072
058	1.00	9000073
059	1.00	9000074
060	1.00	9000075
061	1.00	9000076
062	1.00	9000077
063	1.00	9000078
064	1.00	9000079
065	1.00	9000080
066	1.00	9000081
067	1.00	9000082
068	1.00	9000083
069	1.00	9000084
070	1.00	9000085
071	1.00	9000086
072	1.00	9000087
073	1.00	9000089
074	1.00	9000091
075	1.00	9000093
076	1.00	9000095
077	1.00	9000096
078	1.00	9000097
079	1.00	9000098
080	1.00	9000100
081	1.00	9000101
082	1.00	9000102
083	1.00	9000103
084	1.00	9000104
085	1.00	9000105
086	1.00	9000106
087	1.00	9000108
088	1.00	9000110
089	1.00	9000111
090	1.00	9000112
091	1.00	9000113
092	1.00	9000114
093	1.00	9000115
094	1.00	9000117
095	1.00	9000118
096	1.00	9000119
097	1.00	9000121
098	1.00	9000122

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
099	1.00	25617
100	1.00	9000125
	100.00	
	100.00	

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

PLANT WIDE GENERICS

QUESTION	VALUE	KA
007	1.00	294001A101
008	1.00	294001A102
009	1.00	294001A103
013	1.00	294001A105
012	1.00	294001A106
010	1.00	294001A109
011	1.00	294001A115
001	1.00	294001K101
002	1.00	294001K103
003	1.00	294001K103
004	1.00	294001K105
005	1.00	294001K107
006	1.00	294001K116
PWG Total	13.00	

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
053	1.00	201001A204
044	1.00	201001K205
048	1.00	201002G010
021	1.00	201002K408
024	1.00	202002K108
063	1.00	203000K401
027	1.00	209002A402
028	1.00	209002G010
042	1.00	211000A101
041	1.00	211000A104
039	1.00	212000A214
015	1.00	212000A216
057	1.00	212000K101
036	1.00	215004A405
037	1.00	215004K101
022	1.00	215005A308
035	1.00	215005A403
056	1.00	216000K507
029	1.00	217000A201
030	1.00	217000A404
032	1.00	218000K403
031	1.00	218000K606
058	1.00	223002A302
059	1.00	223002K607

R O Exam B W R Reactor

Organized by K A Group

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
018	1.00	239002A106
046	1.00	261000A304
045	1.00	261000K401
064	1.00	264000A209
PS-I Total	28.00	

Group II

QUESTION	VALUE	KA
049	1.00	201003K404
026	1.00	201004A201
020	1.00	201006G010
019	1.00	201006K402
023	1.00	202001A211
025	1.00	202001K105
043	1.00	202001K506
062	1.00	205000A409
054	1.00	214000A302
055	1.00	214000A402
060	1.00	226001A101
017	1.00	262001A304
016	1.00	262001K306
038	1.00	263000K201
040	1.00	263000K301
033	1.00	271000A301
034	1.00	271000G010
050	1.00	272000K402
061	1.00	290001K603
PS-II Total	19.00	

Group III

QUESTION	VALUE	KA
047	1.00	234000A302
014	1.00	234000K505
052	1.00	288000G007
051	1.00	290002K307
PS-III Total	4.00	

RO Exam BWR Reactor

organized by KA Group

PLANT SYSTEMS

QUESTION	VALUE	KA
PS Total	51.00	

EMERGENCY PLANT EVOLUTIONS

Group I

QUESTION	VALUE	KA
080	1.00	295005G010
090	1.00	295005K302
074	1.00	295006K102
072	1.00	295010K304
089	1.00	295014G010
085	1.00	295014G010
067	1.00	295014K102
076	1.00	295024A108
081	1.00	295024K208
086	1.00	295031K101
077	1.00	295031K212
100	1.00	295037K210
088	1.00	295037K307
EPE-I Total	13.00	

Group II

QUESTION	VALUE	KA
098	1.00	295001A201
083	1.00	295001G010
069	1.00	295002G007
070	1.00	295002K204
095	1.00	295003A102
094	1.00	295003K106
091	1.00	295004G010
079	1.00	295008A201
099	1.00	295016A101
073	1.00	295016K302
071	1.00	295018K202
093	1.00	295018K303
097	1.00	295019G010
065	1.00	295022A102
078	1.00	295026G011
092	1.00	295030A101
096	1.00	295033G012
066	1.00	295034A202

R O Exam B W R Reactor

Organized by K A Group

EMERGENCY PLANT EVOLUTIONS

Group II

QUESTION	VALUE	KA
075	1.00	295038G011
EPE-II Total	19.00	

Group III

QUESTION	VALUE	KA
084	1.00	295021G008
068	1.00	295021K301
087	1.00	295023G010
082	1.00	295036G011
EPE-III Total	4.00	
EPE Total	36.00	
Test Total	100.00	

ANSWER SHEET

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	___	023	a	b	c	d	___
002	a	b	c	d	___	024	a	b	c	d	___
003	a	b	c	d	___	025	a	b	c	d	___
004	a	b	c	d	___	026	a	b	c	d	___
005	a	b	c	d	___	027	a	b	c	d	___
006	a	b	c	d	___	028	a	b	c	d	___
007	a	b	c	d	___	029	a	b	c	d	___
008	a	b	c	d	___	030	a	b	c	d	___
009	a	b	c	d	___	031	a	b	c	d	___
010	a	b	c	d	___	032	a	b	c	d	___
011	a	b	c	d	___	033	a	b	c	d	___
012	a	b	c	d	___	034	a	b	c	d	___
013	a	b	c	d	___	035	a	b	c	d	___
014	a	b	c	d	___	036	a	b	c	d	___
015	a	b	c	d	___	037	a	b	c	d	___
016	a	b	c	d	___	038	a	b	c	d	___
017	a	b	c	d	___	039	a	b	c	d	___
018	a	b	c	d	___	040	a	b	c	d	___
019	a	b	c	d	___	041	a	b	c	d	___
020	a	b	c	d	___	042	a	b	c	d	___
021	a	b	c	d	___	043	a	b	c	d	___
022	a	b	c	d	___	044	a	b	c	d	___
						045	a	b	c	d	___

ANSWER SHEET

Multiple Choice (Circle or X your choice)

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

046	a	b	c	d	___	068	a	b	c	d	___
MULTIPLE CHOICE						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	___
061	a	b	c	d	___	084	a	b	c	d	___
062	a	b	c	d	___	085	a	b	c	d	___
063	a	b	c	d	___	086	a	b	c	d	___
064	a	b	c	d	___	087	a	b	c	d	___
065	a	b	c	d	___	088	a	b	c	d	___
066	a	b	c	d	___	089	a	b	c	d	___
067	a	b	c	d	___	090	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.

091 a b c d ___

MULTIPLE CHOICE

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 ___

099 a b c d ___

100 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 will result in a denial of your application and could result in more severe penalties.

2. After you complete the examination, 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.

3. To pass the examination, you must achieve a grade of 80 percent or greater.

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

5. There is a time limit of 4 hours for completing the examination.

6. Use only black ink or dark pencil to ensure legible copies.

7. Print your name in the blank provided on the examination cover sheet and the answer sheet.

8. Mark your answers on the answer sheet provided and do not leave any question blank.

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

10. Restroom trips are permitted, but only one applicant at a time will be allowed to leave. Avoid all contact with anyone outside the examination room to eliminate even the appearance or possibility of cheating.

11. When you complete the examination, assemble a package including the examination questions, examination aids, and answer sheets and give it to the examiner or proctor. Remember to sign the statement on the examination cover sheet.

12. After you have turned in your examination, leave the examination area as defined by the examiner.

INTENTIONALLY BLANK

QUESTION: 001 (1.00)

The following conditions exist:

- You are assigned to independently verify an equipment markup involving THREE manual gate valves, required to be in the shut position.
- The application of the markup has been completed.
- At the first valve, you attempt a "Hands On" check and find that the valve handwheel rotates in the shut direction.

In addition to notifying the SSS, select the appropriate action.

a. Rotate the handwheel only 1/4 of a turn.

b. Rotate the handwheel until the valve is shut.

c. Return the handwheel to its original position.

d. Leave the valve in its current position and check the remaining TWO valves.

QUESTION: 002 (1.00)

The following conditions exist:

- An individual is making entries into multiple, posted Contaminated Areas for visual checks (tours) of the areas.
- All areas are located in the same general vicinity of the Reactor Building.
- The RWP for entry indicates that each of these Contamination Areas do NOT require full dress out, but only require shoe and hand protection (booties & gloves).
- Other non-contaminated areas in the reactor building will be toured after exiting the last of these Contaminated areas.
- The individual has NO reason to expect that he has become contaminated.

What are the frisking requirements for the individual?

a. He must frisk after exiting each Contaminated Area.

b. He must frisk after exiting any Contaminated Area where his hands touch equipment.

c. He does NOT need to frisk after exiting each Contaminated Area, but must perform whole body monitoring as soon as all the entries are completed.

d. He does NOT need to frisk after exiting any of the Contaminated Areas until exiting the reactor building.

QUESTION: 003 (1.00)

Upon entering the RCA you notice a posted Hot Spot.

Select the MINIMUM whole body radiation exposure level expected from that Hot Spot. (Assume a distance of 30 cm.)

a. 25 mRem/hr.

b. 100 mRem/hr.

c. 1 Rem/hr.

d. 5 Rem/hr.

QUESTION: 004 (1.00)

The following condition exists:

- You are at home and have just completed a meal which included a glass of wine.
- You receive a call-out to fill a shift license position for an unexpected operator absence.
- The SSS reports that no other individual is available.
- You feel fit for work and capable of driving (no impairment).

Concerning the alcohol consumption, you are personally required to:

a. refuse to accept the call out.

b. inform the SSS during the call-out conversation that you have been drinking alcohol.

c. report to security and request a breathalizer alcohol test to establish fitness for duty.

d. report to the control room and inform the SSS of the alcohol intake.

QUESTION: 005 (1.00)

When racking out a 4160V breaker, the CLOSE fuses and the TRIP fuses are removed once the breaker is verified to be open.

What is the purpose of pulling BOTH sets of fuses prior to lowering the breaker?

a. Prevents arch-over on the stabs of the secondary coupler as the breaker is disengaged.

b. Allows the stored energy in the springs to release prior to disengagement of the breaker.

c. Enables the breaker racking protective trip circuits before breaker racking occurs.

d. Permit manual operation of the elevator in the event the elevator motor does NOT operate.

QUESTION: 006 (1.00)

Which of the following is a CSO initial action in response to a Warehouse fire alarm (outside protected area)?

a. Activate the Station Fire Alarm.

b. Implement the CSO Fire Fighting Checklist.

c. Direct only the Fire Brigade leader to the alarm location to verify a fire condition.

d. Dispatch two Fire Brigade members to the alarm location to verify a fire condition.

QUESTION: 007 (1.00)

When may a Master or Satellite Master copy of a procedure be used in lieu of a Controlled Working Copy?

a. Data is being taken for observations and the data sheet supports independent use.

b. The Controlled Working Copy becomes radiologically contaminated.

c. Independent verification of a completed task is being performed.

d. Task implementation does NOT require sign-offs.

QUESTION: 008 (1.00)

By definition, the term "Primary System," when used within the EOPs, refers to any system:

a. that can reduce pressure in the Primary Containment.

b. connected to the RPV and contains radioactive water.

c. connected directly to the RPV that has a reduced leak rate if RPV pressure is lowered.

d. supplied by General Electric Corporation as part of the Nuclear Steam Supply System (NSSS).

QUESTION: 009 (1.00)

A review of operating logs following a loss of feedwater heating transient shows that MCPR reached 1.05 during the transient. Which of the following describes MINIMUM action required concerning plant operation?

a. Engineering analysis is required within 4 hours for continued operations.

b. The reactor is to be placed in HOT SHUTDOWN within 2 hours.

c. Thermal power must be reduced to LESS THAN 25% within the next 15 minutes.

d. Immediately scram the reactor.

QUESTION: 010 (1.00)

The following conditions exist:

- Reactor Power is 80%.
- A trainee, under the direction of the CSO, is currently raising reactor power using recirculation flow.
- A situation occurs that requires a reactor scram.

Which of the following describes the action to be taken?

a. The CSO placing the mode switch in SHUTDOWN.

b. The CSO immediately initiating both divisions of Alternate Rod Insertion.

c. The trainee immediately placing the mode switch in SHUTDOWN.

d. When directed by the CSO, the trainee arming and depressing BOTH Manual Scram pushbuttons.

QUESTION: 011 (1.00)

Which of the following describes the Extended Operating Domain limitation?

Operation is allowed above:

a. the 100% Rod line provided rated core thermal power does NOT exceed 100%.

b. the 100% Rod line provided core flow does NOT exceed 105%.

c. 105% core flow provided rated core thermal power does NOT exceed 100%.

d. 100% rated core thermal power provided rated core flow does NOT exceed 100%.

QUESTION: 012 (1.00)

What is the required relief period for the RO assigned to perform control rod movement during a plant shutdown?

Relief is provided at intervals NOT to exceed approximately:

a. 1/2 hour for a period of at least 1/2 hour.

b. 1 hour for a period of at least 1/2 hour.

c. 2 hours for a period of at least 1/2 hour.

d. 2 hours for a period of least 1 hour.

QUESTION: 013 (1.00)

The EOP Director is giving a crew brief during EOP transition.

Which of the following is NOT proper during the update?

a. Inserting control rods.

b. Making a station announcement.

c. Starting an ECCS pump.

d. Announcing "Master Silence" to the control room personnel.

QUESTION: 014 (1.00)

Which of the following describes a properly oriented fuel bundle?

a. The identification boss on the fuel assembly handle points away from the control rod.

b. The channel spacer buttons are adjacent to the control rod and adjacent to each other.

c. Serial number on the handle is readable from the outside edge of the four bundle fuel cell.

d. The channel fasteners are located on the outside edge of the four bundle fuel cell.

QUESTION: 015 (1.00)

The following conditions exist:

- The plant is operating at 100% power.
- An operator initiated scram becomes necessary.
- The reactor mode switch is taken from RUN to SHUTDOWN.
- All plant protective systems respond as designed.

Select the FIRST Reactor Protection System scram signal generated.

a. APRM Upscale Neutron Flux (Setdown).

b. Mode Switch in SHUTDOWN.

c. IRM Upscale Trip.

d. APRM Flow Biased.

QUESTION: 016 (1.00)

One of the four white Pilot Scram Valve Solenoid lights on P603 for RPS channel "A" is out due to a blown fuse. All RPS "B" white Pilot Scram Valve Solenoid lights are energized.

Which of the following describes the current status of the control rods?

a. 1/4 of control rod scram solenoids fed by RPS "A" are receiving alternate power.

b. 1/4 of control rod scram solenoids fed by RPS "A" should have scrammed.

c. 1/4 of all control rods have received a 1/2 scram.

d. 1/4 of all control rods should have scrammed.

QUESTION: 017 (1.00)

The following conditions exist:

- Reactor water level is 90 inches and decreasing.
- Drywell pressure is 2.2 psig and increasing.

Which of the following describes the expected response of Division I and Division II safety buses, their loads, and the EDGs.

a. ECCS motor loads are sequenced onto the safety buses, some non vital loads are shed from the safety buses, EDGs start and run unloaded.

b. All loads on the safety buses are shed, EDGs start and close in, vital and ECCS loads are then sequenced onto the buses.

c. ECCS motor loads are sequenced onto the safety buses, all existing loads on the buses continue to operate. EDGs have NOT yet started.

d. EDGs start and run unloaded, all existing loads on the buses continue to operate.

QUESTION: 018 (1.00)

With the reactor at 100% power, which of the following would be an indication of an open Safety Relief Valve (SRV)?

a. Reactor pressure trending downward.

b. SRV Tailpipe temperature stable at 500 deg F.

c. Total indicated steam flow increase.

d. Reactor thermal power increase.

QUESTION: 019 (1.00)

With the plant operating at 29% power, a RWM Critical Self-Test Fault will cause:

a. a "SYSTEM IN BYPASS" alarm display.

b. a withdraw and insert rod block.

c. only a withdraw rod block.

d. only an insert rod block.

QUESTION: 020 (1.00)

During a reactor startup, the RWM becomes INOP. In accordance with Technical Specifications, the RWM is bypassed and outward rod motion continued using personnel rod position verification.

Independent rod position verification must be continued until:

a. turbine first stage pressure is above the LPSP.

b. thermal power is greater than 20%.

c. total steam flow is above the LPSP.

d. the LPSP light illuminates.

QUESTION: 021 (1.00)

Which of the following describes why the Continuous Insert pushbutton should NOT be used for normal movement of a control rod to position 00?

a. Loss of the settle function could damage CRD seals.

b. Correct rod position cannot be determined.

c. Control rod speed is excessive.

d. The CRD collet tube may be damaged.

QUESTION: 022 (1.00)

During power reduction, which rod block feature remains enabled (NOT bypassed) when the mode switch is placed in STARTUP?

a. APRM Downscale

b. APRM INOP.

c. RBM Downscale.

d. RBM INOP.

QUESTION: 023 (1.00)

Which of the following signals will result in transferring Reactor Recirculation pumps to slow speed (LFMG) but has NO bypass provision?

Note: Consider only permanently installed bypass capabilities.

a. EOC-RPT Logic.

b. Vessel water level low (L3).

c. Low feedwater flow for 15 seconds.

d. Steam dome temperature to recirculation loop suction differential temperature is less than 10.7 deg F for 45 seconds.

QUESTION: 024 (1.00)

If total feedwater flow drops below the reactor recirculation interlock setpoint, the Reactor Recirculation pumps will downshift to slow speed in order to prevent:

a. excessive axial thrust on the pump.

b. inaccurate wide range level indication.

c. recirculation pump cavitation.

d. flow control valve cavitation.

QUESTION: 025 (1.00)

Which of the following signals will transfer the Reactor Recirculation pumps to slow speed (LFMG) and will trip the pump after 25 seconds, if APRM power is too high?

a. EOC-RPT Logic.

b. Low feedwater flow.

c. High vessel dome pressure.

d. Pump discharge valves NOT full open.

QUESTION: 026 (1.00)

The following conditions exist:

- A reactor startup is in progress.
- An attempt to withdraw a control rod from position 40 to position 48 was initiated using single notch withdrawal.
- The reed switch associated with position 42 did NOT operate.
- The indicated rod position is blank.

Select the appropriate method to continue with the startup.

a. Continue the rod withdrawal .

b. Insert the rod to position 40 and then depress CONTINUOUS WITHDRAW pushbutton until the rod reaches position 44.

c. Bypass the Rod Sequence Control System function for that control rod.

d. Install a substitute position for the rod at position 42.

QUESTION: 027 (1.00)

The High Pressure Core Spray (CSH) Suppression Pool Suction Valve (MOV-118) will automatically open when:

a. a low CST "B" level or high suppression pool level exists.

b. the CSH CST Suction valve (MOV-101) automatically goes closed with a CSH initiation signal present.

c. a CSH initiation signal is present AND either a low CST level or high suppression pool level exists.

d. the CSH CST Suction valve (MOV-101) is automatically or manually full closed, regardless of CSH initiation conditions.

QUESTION: 028 (1.00)

The High Pressure Core Spray (CSH) system is operating in the CST-To-CST full flow test mode. The "CSH Keylock Test Switch" on panel 2CEC*PNL625 is in the TEST position.

SELECT the effect if the injection valve MOV-107 is manually opened.

a. Test return valves, MOV-110 and MOV-112, will auto close.

b. CSH Pump suction automatic swapover will NOT occur.

c. MOV-107 will close when the control switch is returned to AUTO.

d. CSH pump runout will occur.

QUESTION: 029 (1.00)

Which of the following will prevent RCIC discharge to the CST through the test line return valves FV-108 and MOV-124?

a. The CST suction valve MOV-129 is open.

b. RCIC minimum flow valve MOV-143 is open.

c. CST level is greater than 102 inches.

d. Reactor level is less than 102 inches.

QUESTION: 030 (1.00)

The following conditions exist while at power:

- The Reactor Core Isolation Cooling (RCIC) system was started in the full flow test mode for a surveillance.
- An Auxiliary Operator reports that there is a steam leak on the RCIC turbine.
- The Control Room Supervisor directs the Control Room Operator to isolate RCIC.

Which of the following will result if the operator depresses the "RCIC Manual Isolation" pushbutton?

a. The RCIC system continues to operate.

b. A full RCIC system isolation and turbine trip occurs.

c. Steam Supply valve MOV-121 closes and the RCIC turbine trips.

d. Steam Supply valves MOV-128 and MOV-150 close and the RCIC turbine trips.

QUESTION: 031 (1.00)

The following conditions exist:

- A valid Automatic Depressurization System (ADS) initiation signal has been received.
- ADS Logic Channel "A" FAILS TO actuate due to loss Division I DC power.
- ADS Logic Channel "B" actuates (energizes).

How many ADS valves will open?

a. 0

b. 3

c. 4

d. 7

QUESTION: 032 (1.00)

The following conditions exist:

- A large reactor coolant leak has occurred.
- LPCS and all RHR pumps are running.
- The Automatic Depressurization System automatically actuated.
- All ADS SRVs are open.
- Reactor water level is now steady at 150 inches.
- Reactor pressure is 200 psig.

If the DIV I and II ADS LOGIC INITIATION SEAL-IN RESET pushbuttons are depressed and released which of the following describes the result on the Automatic Depressurization System?

The ADS SRVs will:

a. close and then reopen when the pushbuttons are released.

b. close and then reopen after 105 seconds.

c. close and remain closed.

d. remain open.

QUESTION: 033 (1.00)

Which of the following signals will trip the Condenser Air Removal Pump P1A?

a. Offgas Post Treatment High radiation.

b. Loss of the Seal Water pump ARC-P2A.

c. All Main Steam Radiation Monitors 1.5 NFPB.

d. Mode switch in RUN.

QUESTION: 034 (1.00)

Operation of the Condenser Air Removal Pumps P1A/B is prohibited above 5% APRM average power because:

a. there is no provision for radioactive monitoring of the discharge.

b. this prevents buildup of explosive hydrogen concentrations.

c. the pumps cannot generate sufficient vacuum for turbine operation.

d. the pumps cannot remove sufficient gases when greater than 5% power.

QUESTION: 035 (1.00)

The APRM Channel A meter function switch is placed in the "COUNT" position.

Which of the following is the MINIMUM indication for the APRM to be considered operable assuming the level requirements are met?

a. 50%

b. 70%

c. 80%

d. 100%

QUESTION: 036 (1.00)

SELECT the Source Range Monitoring (SRM) rod block that is "bypassed" by depressing the SRM INOP INHIBIT pushbutton.

a. Channel mode switch out of "OPERATE"

b. SRM Upscale

c. SRM Downscale

d. Count rate less than 100 cps with detector NOT fully inserted

QUESTION: 037 (1.00)

Which of the following is independent of the reactor mode switch position?

a. SRM Downscale Rod Block.

b. SRM Upscale Rod Block.

c. SRM Detector NOT Full In Rod Block.

d. SRM Upscale Scram.

QUESTION: 038 (1.00)

With the reactor power at 3%, which of the following will occur if both divisions of the non-safety related 24 VDC electrical system are lost?

a. All stack gas effluent monitoring will be lost.

b. MSIVs will receive a half group I isolation signal.

c. Recirculation Flow control valves will lock up.

d. The reactor will scram.

QUESTION: 039 (1.00)

While at power, the actual water level in ONE Scram Discharge Volume (SDV) exceeds the high-high level setpoint (49 inches). In addition to alarms, which of the following will result?

a. Only a half reactor scram.

b. A full reactor scram.

c. The SDV vent and drain valves open.

d. Only a control rod block.

QUESTION: 040 (1.00)

Which of the following describes the effect on Diesel Generator 2EGS*EG2 (CSH) if battery and charger power to Division Three 125 VDC is lost?

a. If running, the diesel will continue to operate but output breaker controls are lost.

b. If running, the diesel will continue to operate but some protection for the engine and output breaker is lost.

c. The diesel will trip or fail to start and cannot be locally emergency started.

d. The diesel will trip or fail to start until DC power from 2CES*IPNL414 is manually shifted to Division Two (SWG002B).

QUESTION: 041 (1.00)

The following conditions exist:

- An ATWS is in progress.
- Reactor pressure is 1000 psig.
- The operator places both Standby Liquid Control (SLS) switches to the RUN position.
- SLS system "A" starts normally.
- SLS "B" alarm "SLCS PMP 1B VALVE 1B/5B MOT OVERLOAD alarm is received.

Which of the following describes the expected SLS system status?

SLS pump "B" is:

a. running with all injection through Outboard Isolation Valve SLS MOV 5A.

b. running, Storage tank Outlet Valve SLS MOV 1B or SLS MOV 5B is closed or intermediate.

c. NOT running, SLS MOV 1B is closed or intermediate, SLS explosive valve VEX-3B is fired.

d. NOT running, SLS MOV 5B is closed or intermediate, SLS explosive valve VEX-3A is fired.

QUESTION: 042 (1.00)

The following conditions exist:

- An ATWS is in progress.
- Reactor pressure is 1000 psig.
- The Standby Liquid Control System (SLS) is initiated.

Which of the following is positive indication that the SLS system is injecting?

a. Both white squib continuity lights on P601 are extinguished.

b. At least one SLS pump is running.

c. The SLS pump discharge pressure is 1000 psig.

d. The SLS tank level is decreasing.

QUESTION: 043 (1.00)

Which of the following describes the effect when the Redundant Reactivity Control System (RRS) system is manually initiated instead of automatically initiated?

a. The recirculation pumps trip immediately from either speed.

b. The recirculation pumps do NOT automatically downshift or trip.

c. The Standby Liquid Control System initiates without a 98 second delay.

d. The feedwater runback feature occurs without a 25 second delay.

QUESTION: 044 (1.00)

Which of the following describes the effect on Alternate Rod Insertion (ARI) of deenergizing one Division of the Redundant Reactivity Control System (RRS) system?

a. The ARI system will still function using only four RRS-ARI valves.

b. The four RRS-ARI valves powered from the deenergized Division will cause rod insertion.

c. The ARI system will still function using all eight RRS-ARI valves.

d. Alternate Rod Insertion will NOT function.

QUESTION: 045 (1.00)

The following conditions exist:

- The Standby Gas Treatment System (GTS) automatically initiated on a valid signal which has NOT cleared.
- The control switch for the "B" train is placed in STOP and returned to the AUTO position.
- The "B" train stops and then restarts.

Which of the following is the expected cause for the "B" train restart?

a. Reactor Building pressure is -0.30 inches WG.

b. The "B" train charcoal temperature exceeds 300 deg F.

c. The initiation signal is still present.

d. GTS flow from only the "A" train is less than 4000 CFM.

QUESTION: 046 (1.00)

Which of the following will automatically close Standby Gas Treatment System (GTS) decay heat cross tie valve, *MOV28A?

a. Greater than 240 deg F. in the piping between *MOV28A and *MOV28B.

b. Charcoal filter temperature greater than 300 deg F in train "A".

c. Charcoal filter temperature greater than 300 deg F in train "B".

d. Train "A" fan 1A Discharge Isolation Valve *MOV3A open.

QUESTION: 047 (1.00)

With the Refueling Platform over the reactor vessel, which of the following, BY ITSELF, will initiate a rod withdraw block for any selected rod?

a. Auxiliary Hoist loaded.

b. Any rod NOT fully inserted.

c. Mode switch in STARTUP.

d. Grapple NOT engaged.

QUESTION: 048 (1.00)

Which of the following describes a requirement for conducting control rod coupling checks?

Coupling checks must be completed:

a. for all control rods, prior to reactor criticality after any shutdown.

b. for any control rod that has received a rod drift alarm.

c. only the first time that each control rod reaches position 48 after a reactor startup.

d. anytime a control rod is withdrawn to the full out position during operation.

QUESTION: 049 (1.00)

Which of the following describes the response of a control rod if the ball-check valve in the drive mechanism is stuck closed during a scram?

(Assume normal HCU operation and accumulator pressure.)

The control rod will:

a. insert until accumulator pressure is less than reactor pressure.

b. NOT insert if accumulator pressure is less than 900 psig.

c. scram slower than normal after accumulator pressure is less than reactor pressure.

d. have no change in the scram insertion speed.

QUESTION: 050 (1.00)

IDENTIFY the Process Radiation Monitor system (RMS) that WILL cause an automatic action when excess radioactivity is detected, but does NOT prevent a radioactive release.

a. Control Room Ventilation RMS

b. Service Water Discharge RMS

c. Condenser Air Removal Pump Exhaust RMS

d. Offgas Pretreatment Discharge RMS

QUESTION: 051 (1.00)

Which of the following is indication of a reactor recirculation jet pump failure (loss of the nozzle)?

Indicated recirculation loop flow (recorder B35-R614 on P-602) in the loop with the failed jet pump will:

a. increase and core thermal power will increase.

b. increase and indicated total core flow (B22-R613 on P-603) will increase.

c. decrease and indicated total core flow (B22-R613 on P-603) will increase.

d. decrease and main generator output will decrease.

QUESTION: 052 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- The main steam tunnel fan (2HVT-FN11) trips on motor overload and cannot be restarted.

Which of the following describes the expected result

a. The standby turbine building supply fan (FN1A,B,C) will automatically start on high steam tunnel temperature.

b. The standby turbine building exhaust fan (FN2A,B,C) will automatically start on high steam tunnel temperature.

c. Steam tunnel unit coolers will automatically start when local temperature reaches 85 deg F.

d. The Main Steam Isolation Valves will isolate on high steam tunnel temperature.

QUESTION: 053 (1.00)

Which of the following describes automatic operation of the in-service control rod drive Flow Control Valve (FV 6A/B) immediately after a scram?

FV 6A/B will:

a. receive a close signal.

b. receive an open signal.

c. open to maintain the flow setting.

d. remain in the pre-scram position until the scram is reset.

QUESTION: 054 (1.00)

Following an automatic reactor scram, the BLUE light for one control rod on the full core display is NOT illuminated.

What does this indicate for the control rod in question?

a. The control rod is NOT at position 00.

b. At least one scram valve is NOT open.

c. The green "FULL IN" indication is NOT valid.

d. Reed switch S52 indication is lost.

QUESTION: 055 (1.00)

A control rod that is coupled, has drifted to its full out mechanical stop.

IDENTIFY the expected indication for that individual control rod.

a. "Rod Overtravel" alarm and "48" in the rod position display.

b. "Rod Overtravel" alarm and a blank rod position display.

c. "Red" full out light and a blank rod position display.

d. "Red" full out light and "48" in the rod position display.

QUESTION: 056 (1.00)

Identify the set of conditions for which ALL reactor water level indicators should be considered invalid.

	DRYWELL TEMPERATURE	RPV PRESSURE
a.	200 degrees F,	30 psig
b.	270 degrees F,	40 psig
c.	325 degrees F,	90 psig
d.	350 degrees F,	100 psig

QUESTION: 057 (1.00)

During power reduction, which of the following Reactor Protection System automatic scrams is bypassed by taking the mode switch from RUN to STARTUP ?

a. Scram Discharge Volume Level High.

b. Turbine Control Valve Fast Closure.

c. Turbine Stop Valve Closure.

d. APRM Upscale (118%).

QUESTION: 058 (1.00)

The following conditions exist:

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

Which of the following was the only signal that could have generated the MSIV isolation?

a. Low reactor water level

b. High main steam line flow.

c. High main steam line radiation

d. Low main steam line pressure

QUESTION: 059 (1.00)

Inoperability of a Group 9 automatic primary containment function and entry into Technical Specifications will result if total power output is lost from:

a. 2VBB-UPS1A.

b. 2VBB-UPS1B.

c. 2VBA*UPS2A.

d. 2VBA*UPS2B.

QUESTION: 060 (1.00)

The following conditions exist:

- There is a steam leak in the drywell.
- The "B" loop RHR pump was placed in operation.
- Drywell spray valves MOV-25B and MOV-15B are stroking open.

Select the expected automatic system response if the high drywell pressure clears before the valves are full open?.

Drywell spray valves:

a. stroke full open then close.

b. reverse direction and close.

c. stop in an intermediate position.

d. stroke full open.

QUESTION: 061 (1.00)

The reactor is in Mode 5. Which of the following is required if both trains of the Standby Gas Treatment System (GTS) become inoperable?

a. Establish Primary Containment.

b. Evacuate the Refuel Floor.

c. Stop moving irradiated fuel.

d. Secure and isolate reactor building ventilation.

QUESTION: 062 (1.00)

During a refueling outage, total drive flow through the jet pumps (RHR Shutdown Cooling and Recirculation Drive Flow) should be less than 5700 gpm when:

a. any control rod is withdrawn.

b. LPRMs are NOT fully surrounded by fuel or a blade guide.

c. there is no fuel in the reactor vessel.

d. any blade guide is installed.

QUESTION: 063 (1.00)

The following conditions exist:

- The reactor is in Mode 4.
- The "A" loop of RHS is in shutdown cooling.
- The "B" loop of RHS is in suppression pool cooling.
- A valid Level 1 reactor water level condition occurs.

Which of the following describes the automatic response of the RHS system?

a. The "A" and "B" RHS pumps trip, the "B" loop shifts to the injection mode, and the "B" RHS pump restarts.

b. The "A" RHS continues in shutdown cooling and the "B" RHS pump trips.

c. The "A" RHS pump trips and the "B" loop realigns to the injection mode.

d. The "A" RHS continues in shutdown cooling and the "B" loop realigns to the injection mode.

QUESTION: 064 (1.00)

The following conditions exist:

- The Division III (CSH) Diesel Generator is operating in the test mode and paralleled to the offsite power grid.
- A total LOOP signal is received.

Which of the following describes the expected Division III response?

a. The CSH DG will try to supply power offsite until the offsite feeder breaker trips on directional overcurrent.
The CSH DG will power 2ENS*SWG 102.
All DG safety shutdowns remain in effect.

b. The CSH DG will try to supply power offsite until the DG output breaker trips on overcurrent.
The offsite feeder breaker trips on loss of voltage.
All DG safety shutdowns remain in effect.

c. The CSH DG output breaker and the offsite feeder breaker trip.
The CSH DG will continue to run unloaded.
Only emergency DG safety shutdowns remain in effect.

d. The CSH DG output breaker and the offsite feeder breaker trip.
The CSH DG output breaker will then automatically close.
Only emergency DG safety shutdowns remain in effect.

QUESTION: 065 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- CRD pump P1A is inoperable for maintenance.
- CRD pump P1B trips and cannot be immediately restarted.
- One accumulator is inoperable for a withdrawn control rod.

A manual scram is required:

a. immediately.

b. if reactor pressure decreases to less than 900 psig.

c. if one additional accumulator trouble alarm occurs.

d. if NOT able to start one CRD pump within 20 minutes.

QUESTION: 066 (1.00)

The scram discharge volume vent and drain valves are verified closed by N2-SOP-101C, "Reactor Scram".

Which of the following is an adverse consequence if they do NOT close when a scram occurs?

a. There will be a primary leak to the reactor building.

b. The CRD discharge path has insufficient back pressure.

c. Excess control rod insertion speed will damage the drive mechanism.

d. The reactor pressure will be necessary to complete rod insertion.

QUESTION: 067 (1.00)

During rod withdrawal for a startup, the HIGHEST worth control rods are considered to be:

a. position 8-12 at high coolant temperatures.

b. position 8-12 at low coolant temperatures.

c. position 12-16 at high coolant temperatures.

d. position 12-16 at low coolant temperatures.

QUESTION: 068 (1.00)

The reactor is shutdown in Mode 4. Which of the following requires that reactor water level be raised and maintained at 227 - 243 inches on the Shutdown Range?

a. The "A" recirculation pump running with CRD "A" pump running.

b. No reactor recirculation pumps running with one shutdown cooling loop operating at greater than 180 Deg F. coolant temperature.

c. No reactor recirculation pumps running with one shutdown cooling loop at 5000 gpm and cannot be raised.

d. One recirc pump running with no shutdown cooling loops in operation.

QUESTION: 069 (1.00)

With the reactor initially at 100% power, the following conditions have occurred:

- Main condenser vacuum started decreasing due to a problem with the Off Gas system.
- Power reduction per N2-SOP-09, Loss of Vacuum, was started.
- Vacuum reached 23" Hg and a manual reactor scram was initiated.

Which of the following should NOT be immediately performed after the scram?

a. Open any turbine bypass valves.

b. Start both Off Gas vacuum pumps.

c. Place the standby SJAE in service.

d. Start one Condenser Air Removal Pump.

QUESTION: 070 (1.00)

With an initial main condenser vacuum of 28" Hg, and a loss of vacuum in progress, at what vacuum (decreasing) will the main condenser be lost as a heat sink?

a. 22.1" Hg vacuum.

b. 18.5" Hg vacuum

c. 7.0" Hg vacuum

d. 0.0" Hg vacuum

QUESTION: 071 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- Reactor Building Closed Cooling Water Pump 2CCP-P1C and P3C are out of service for maintenance on SWG014.
- 2CCP-P1A, P1B, P3A, and P3B are operating.
- An electrical transient causes the running CCP pumps to trip and lock out.

Select the IMMEDIATE operator action(s).

a. Only trip both WCS cleanup pumps.

b. Trip both WCS cleanup pumps and scram the reactor.

c. Trip the main turbine and scram the reactor.

d. Scram the reactor and trip both recirculation pumps.

QUESTION: 072 (1.00)

While at 100% power, if both reactor recirculation pump seals fail on one pump, the maximum expected increase in leak rate to the drywell will be approximately:

a. 5 gpm

b. 30 gpm

c. 50 gpm

d. 100 gpm

QUESTION: 073 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- The SSS has decided to enter N2-SOP-78, "Control Room Evacuation" due to nausea from an unknown airborne contaminant.
- All immediate actions of SOP-78 could NOT be completed.

Which of the following permits the main turbine to be immediately tripped at the front standard?

a. The reactor remains critical after control room evacuation.

b. The mode switch remains in the RUN or STARTUP position after evacuation.

c. Upon arrival at the front standard.

d. The reactor is locally scramed.

QUESTION: 074 (1.00)

For which of the following would continued execution of N2-EOP-RPV, "RPV Control", be performed instead of entering N2-EOP-C5, "LEVEL/POWER CONTROL"?

a. all control rods are inserted to position 02 except one at position 04.

b. all control rods are inserted to position 00 except one at position 48.

c. all APRMs are downscale and the reactor period is negative.

d. The on shift STA states that the reactor will remain shutdown under all conditions.

QUESTION: 075 (1.00)

Turbine building HVAC radiation (2HVT-RE206) cannot be determined.

Which of the following requires entry into N2-EOP-MSL, "MSIV Leakage Control"?

a. Offgas pretreatment radiation (2OFG-RE13A/B) are above the "Alert" level.

b. Stack AND vent GEMs are exceeding the alarm setpoint (P882).

c. The MSIVs have any isolation signal with a existing confirmed reactor fuel leak.

d. The MSIVs have an isolation signal from high Main Steam Line radiation (3xNFPB).

QUESTION: 076 (1.00)

The following conditions exist:

- There is a coolant leak into containment.
- The reactor has been successfully scrammed.
- Plant parameters are approaching limits that require emergency depressurization.
- Emergency depressurization is anticipated and main turbine bypass valves have been opened in accordance with N2-EOP-RPV, section RP.
- The Suppression Pool Level is normal.

Conditions degrade and immediate "Emergency RPV Depressurization" per N2-EOP-C2 is directed. Select the REQUIRED operator action.

a. Close the bypass valves and open 7 SRVs valves.

b. Open 7 SRVs and leave the bypass valves open.

c. Continue depressurization using only bypass valves.

d. Depressurize using bypass valves and 5 SRVs.

QUESTION: 077 (1.00)

The following conditions exist:

- Emergency RPV Depressurization per N2-EOP-C2 is required.
- SRVs are NOT available.
- MSIV Isolation interlocks have been defeated per EOP-6, att 18, "Depressurizing to the Condenser".

Which of the following MSIV isolations remain active?

a. RPV low level.

b. Main steam line high radiation.

c. Main steam line low pressure.

d. Manual MSIV isolation.

QUESTION: 078 (1.00)

With Suppression Pool Temperature initially 80 Deg F, the following conditions now exist:

- One SRV spuriously opened at 1105 AM.
- The keylock switch for the associated SRV was placed in OFF.
- The valve position indication for the SRV was RED and is now GREEN.
- There is a steam flow/feed flow mismatch and generator output is decreased.
- SRV tailpipe temperature is steady at 348 Deg F.
- Average Suppression Pool temperature is rising approximately 2.0 Deg F/minute.

Select the required action.

a. Enter N2-SOP-34 "Stuck Open SRV" and Scram at 1110 AM if conditions remain the same.

b. Enter EOP-PC "Primary Containment Control" Scram when suppression pool temperature exceeds 110 Deg F.

c. Place suppression pool cooling in service and wait to determine actual SRV position.

d. Exit N2-SOP-34 "Stuck Open SRV" and restore suppression pool temperature to less than 90 Deg F per EOP-PC.

QUESTION: 079 (1.00)

The following conditions exist:

- The reactor feedwater level control system has malfunctioned.
- Reactor water level is 210 inches and rising rapidly.
- All automatic actions occurred except that ONE feed pump failed to trip.
- Level is continuing to rise rapidly.

IDENTIFY the reactor water level range indicator that MUST be used to determine water level under these conditions.

a. Shutdown Range

b. Narrow Range

c. Upset Range

d. Wide Range

QUESTION: 080 (1.00)

The following conditions exist:

- The reactor was at 100% power.
- A malfunction caused bypass valves to open.
- Reactor pressure is decreasing rapidly.
- The mode switch is placed in SHUTDOWN at approximately 900 psig.
- SOP-101C, "Reactor Scram" is entered and ALL immediate actions are complete.
- Reactor pressure continues to decrease.

Which of the following is required?

a. Close the outboard MSIVs before reaching 500 psig.

b. Trip the main turbine before reaching 363.3 MWe.

c. Verify that the Backup Pressure regulator is in service.

d. Enter N2-EOP-PC, "Primary Containment Control".

QUESTION: 081 (1.00)

A Safety Relief Valve (SRV) tailpipe vacuum breaker has failed in the open position during SRV operation.

Which of the following will result?

a. Direct pressurization of the drywell each time the SRV is opened.

b. Steam bypassing the T-quenchers with a direct discharge path into the suppression pool water.

c. Suppression pool water being drawn up into the SRV tailpipe line after the SRV is closed.

d. Incorrect relief mode setpoints for this SRV due to reduced back pressure.

QUESTION: 082 (1.00)

Which of following conditions will ALWAYS require entry into N2-EOP-SC "Secondary Containment Control"?

a. Standby Gas Treatment system automatically started.

b. High Pressure Core Spray area temperature high.

c. Turbine building HVAC automatic shutdown.

d. RCIC Pump Room sump overflowing.

QUESTION: 083 (1.00)

The following conditions exist:

- Reactor power is 99% at 101% rod line.
- A sudden reduction in core flow is experienced.
- One recirculation pump is running with core flow at 48 mlb/hr.

Which of the following is required?

a. Continuously monitor for unstable neutron flux and immediately insert CRAM rods or raise core flow.

b. Continuously monitor for unstable neutron flux and scram if flux oscillations exist.

c. Immediately place the mode switch in SHUTDOWN.

d. Reduce recirculation flow to minimum and place the mode switch in SHUTDOWN.

QUESTION: 084 (1.00)

The following conditions exist two days after shutdown from 100% power operation:

- The reactor is in Mode 4 to replace a recirculation pump seal.
- The plant has experienced a Station Blackout.
- The HPCS diesel did NOT start.
- Reactor vessel level is stable at 180 inches.
- Reactor water temperature is 160 Deg F. and increasing.

Which of the following must be performed before or concurrent with any other actions?

a. Attempt to establish a steam flow path to the main condenser.

b. Establish primary AND secondary containment before exceeding 200 deg F.

c. Open the reactor head vents before exceeding 212 deg F.

d. Enter N2-EOP-RPV, "RPV Control".

QUESTION: 085 (1.00)

The following conditions exist:

- The reactor was initially at 95% power and 100% rod line.
- Feedwater (FW) temperature has decreased 10 deg F in the last 10 minutes and is trending downward.
- Reactor power is trending upward.
- No reason for the feedwater temperature decrease is known.

Which of the following is required.

a. Reduce reactor power to less than 3120 Mwt.

b. Verify both recirculation controllers in manual and stabilize reactor power.

c. Reduce power to less than 80% using ONLY recirculation flow.

d. Scram if in the BAD region of FW temp/thermal power limits of N2-SOP-08 Fig #1.

QUESTION: 086 (1.00)

Which of the following constitutes "Adequate Core Cooling"?

NOTE: Only the injection sources stated are injecting.
Reactor pressure is 500 psig.
Levels given are actual.

a. ATWS in progress, the feed system is maintaining level between -50 inches and -14 inches, MSIVs are open.

b. All rods in, 7 ADS valves are open, RPV level is -50 inches and decreasing, MSIVs are closed.

c. All rods in, RCIC is injecting, 1 SRV is open, RPV level is -60 inches, MSIVs are closed.

d. ATWS in progress, CRD, RCIC and SLS (with Boron) are injecting, RPV level is -50 inches, MSIVs are open.

QUESTION: 087 (1.00)

With refueling operations in progress, the following occurs:

- A fuel bundle is dropped during withdrawal from the core.
- The bundle is resting about 30 degrees off vertical in the reactor vessel.
- NO radiation alarms have been received.

Select the IMMEDIATE action.

a. Stop all refueling operations AND immediately evacuate ALL persons from the Refuel Floor.

b. Stop all refueling operations AND await instructions from the refuel floor SRO/LSRO or SSS.

c. Evacuate unnecessary personnel from the Refuel Floor AND Drywell.

d. Isolate the reactor building ventilation AND start the Standby Gas Treatment System.

QUESTION: 088 (1.00)

During an ATWS, which of the following alternate methods for control rod insertion will provide the maximum differential pressure over the full travel of the control rod?

(Note: Assume the scram is reset or can be reset.)

a. Vent the scram air header.

b. Using the individual control rod Scram Test Switches.

c. Using the Reactor Manual Control System to drive rods.

d. De-energize the scram solenoids using the power select switch.

QUESTION: 089 (1.00)

The following conditions exist in the order given:

- The reactor was operating at 70% power between the 70% and the 100% rod lines.
- Annunciator 602119, "RECIRC PUMP 1A/1B MOTOR AUTO TRIP" alarms.
- Recirculation pump 1B has tripped and pump speed is 50 rpm.
- Core flow is 55% and stable.
- Reactor power is now 52%.

Select the required action.

a. Place the Mode Switch is SHUTDOWN.

b. Close pump discharge valve, 2RCS*MOV18B.

c. Raise core flow to exit the restricted zone.

d. Reduce the Maximum Average Planer Linear Heat Generation Rate, (MAPLHGR) within 15 minutes.

QUESTION: 090 (1.00)

With the reactor at 100% power, which of the following will result in a reactor scram AND a DIRECT automatic transfer of the recirculation pumps from 60 Hz to 15 Hz?

a. Main turbine trip.

b. Reactor Feedwater Pump trip.

c. Drywell pressure high - 1.68 psig.

d. Reactor water level high - Level 8.

QUESTION: 091 (1.00)

Manual control of the Feedwater Level Control System is immediately required if power is lost from:

a. 2BYS-SWG001A

b. 2BYS-SWG001B

c. 2BYS*SWG002A

d. 2BYS*SWG002B

QUESTION: 092 (1.00)

A plant event has required entry into N2-EOP-C5 "Level/Power Control" and N2-EOP-PC "Primary Containment Control". Suppression pool level is decreasing.

Given this situation, ECCS pump operation is allowed below the vortex level limit for any system:

a. if no other indications of cavitation exist.

b. only if reactor water level is below -38 inches.

c. anytime reactor water level is below -14 inches.

d. irrespective of suppression pool water level.

QUESTION: 093 (1.00)

The following conditions exist:

- The reactor is in Mode 4.
- One loop of RHR shutdown cooling is in operation at rated flow.
- The opposite loop Reactor Recirculation Pump, (RCS-P1A/B) is operating at minimum flow.

IDENTIFY the limitation for operating RCS-P1A/B if all Reactor Building Closed Cooling Loop (CPP) flow to the pump is lost.

The recirculation pump:

a. can be run until continuous motor temperature exceeds 248 Degrees F. provided that CRD seal injection is maintained.

b. can be run indefinitely provided that CRD seal injection is maintained to the seal.

c. must be tripped if any motor or bearing temperature alarm occurs.

d. must be tripped without delay.

QUESTION: 094 (1.00)

The following conditions exist:

- A station blackout has occurred.
- Both Div I and Div II Emergency Diesels (EDG) failed to start.
- The Div III EDG started and was immediately shutdown.
- Subsequently, 2ENS*SWG101 is now being supplied from the DIV III EDG per N2-SOP-03 "Loss of All AC Power".

Which of the following is PROHIBITED in this electrical lineup?

a. Starting an RHR pump.

b. Starting a second Div I Service Water Pump.

c. Starting the HPCS pump.

d. Starting a CRD pump.

QUESTION: 095 (1.00)

The non-emergency automatic safety trips for the Emergency Diesel Generators (EDG) will be bypassed for Div I and II but will remain active for Div III if the EDG automatic starts are caused by:

a. loss of bus voltage on the respective electrical bus.

b. high drywell pressure or low RPV level.

c. only high drywell pressure.

d. only low RPV level.

QUESTION: 096 (1.00)

The following conditions exist:

- The reactor is at 100% power
- Various reactor building area radiation monitors are alarming.
- A leak of unknown origin, in the reactor building, has been reported to the control room.

Which of the following systems may be isolated?

a. High Pressure Core Spray

b. Control Rod Drive

c. Reactor Water Cleanup

d. Low Pressure Core Spray

QUESTION: 097 (1.00)

With the reactor initially at 100% power, a rapid loss of instrument air pressure, as indicated on 2CEC*PNL851, will require an immediate reactor scram if:

a. pressure reaches 80 psig.

b. any MSIV loses full open indication.

c. any control rod has scrammed.

d. more than one control rod drifts.

QUESTION: 098 (1.00)

A recirculation pump was inadvertently tripped and is to be restarted. The temperature and flow requirements for starting an idle recirculation loop have been verified.

Select the MAXIMUM time allowed to start the pump before the temperature and flow requirements must be verified again.

a. 5 min.

b. 10 min.

c. 15 min.

d. 30 min.

QUESTION: 099 (1.00)

The following conditions exist:

- There has been a major fire in the Control Room.
- N2-SOP-78 "Control Room Evacuation", has been entered.
- The reactor was NOT shutdown prior to leaving the control room.

WHICH of the following has the responsibility to scram the reactor outside of the control room?

a. Control Room "E"

b. Inplant Operator

c. SSS/ASSS

d. CSO

QUESTION: 100 (1.00)

During power ascension the following plant conditions are noted to occur over a 2 minute period.

- Reactor pressure decreased to 750 psig, now stable at 750 psig.
- Reactor Water Level is +180 inches trending to normal.
- Reactor power decreased 5%, now stable at 50%
- Generator output decreased approximately 50 Mwe.
- No automatic actuations have occurred.

Which of the following is required?

a. Increase power with recirculation flow.

b. Initiate Rapid Power Reduction, N2-SOP-101D.

c. Manually control EHC to raise reactor pressure.

d. Scram the reactor and close the MSIVs.

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

ANSWER: 001 (1.00)

b.

REFERENCE:

N2-ODP-OPS-0106, Rev 10, pg 15, step 3.4.2.b.
GAP 01 & 02
Lesson Plan O2-LOT-007-355-2-01, rev. 3, EO 1.5; c.5.e, pg 17.

[3.7/3.7]
294001K101 ..(KA's)

ANSWER: 002 (1.00)

c.

REFERENCE:

GAP-RPP-01, Rev 03, pgs 4-5, 3.4.2.b.

[3.3/3.8]
294001K103 ..(KA's)

ANSWER: 003 (1.00)

a.

REFERENCE:

S-RAP-RPP-0103, Rev 05, pg 8, 4.10.

[3.3/3.8]
294001K103 ..(KA's)

ANSWER: 004 (1.00)

b.

REFERENCE:

NIP-FFD-01, rev 03, pg 2, 2.4.3 & pg 12, 3.5.1-3.5.2.
10CFR26.20, "...require a statement to be made by a called-in-person as to whether alcohol has been consumed etc."

[3.2/3.7]
294001K105 ..(KA's)

ANSWER: 005 (1.00)

a.

REFERENCE:

N2-ODP-OPS-0106, rev 10; pgs 24-25, 3.9.4.f.

[3.3/3.6]
294001K107 ..(KA's)

ANSWER: 006 (1.00)

d.

REFERENCE:

EPIP-EPP-28,rev 02, pgs 1-2, 3.1.1.c & 3.1.2.
03OPS-006-350-3-01, rev 0; EO-3.0, pg 27.

[3.5/3.6]
294001K116 ..(KA's)

ANSWER: 007 (1.00)

d.

REFERENCE:

NIP-PRO-01, rev 03, pg 3, 3.2.3.
03-OPS-006-343-3-01, rev 1, EO-5.0, pg 14.

[2.9/3.4]
294001A101 ..(KA's)

ANSWER: 008 (1.00)

c.

REFERENCE:

NMP2 EOP BASIS DOCUMENT, rev 2, pg 13, Section C, 3rd pp.
O2-REQ-006-344-2-20, rev 0; EO-1.0 ff., page 3.

[4.2/4.2]
294001A102 ..(KA's)

ANSWER: 009 (1.00)

b.

REFERENCE:

Technical Specification, pg 2-1, SAFETY LIMIT 2.1.2 ACTION.

[2.7/3.7]
294001A103 ..(KA's)

ANSWER: 010 (1.00)

a.

REFERENCE:

GAP-OPS-01, rev 06, pgs 6-7, 3.1.4.1 & 3.1.6.g&i;pgs 8-9, 3.1.7
N2-ODP-OPS-0106 rev 10, pg 37, 3.13.4.
N2-ODI-5.30 rev 05, pg 7, 4.2.5.1 -

[3.3/4.2]
294001A109 ..(KA's)

ANSWER: 011 (1.00)

a.

REFERENCE:

N2-OP-101D rev 03, pg 3, Precaution & Limitation 10.1.

[3.2/3.4]
294001A115 ..(KA's)

ANSWER: 012 (1.00)

b.

REFERENCE:

N2-ODP-OPS-0110 rev 6, pg 5, 3.1.13.c.
O2-REQ-007-353-2-02 rev 0 (O2-LOT-007-353-2-02), EO-1.0.

[3.4/3.6]
294001A106 ..(KA's)

ANSWER: 013 (1.00)

d.

REFERENCE:

N2-ODI-5.30 rev 05, pg 2, 4.1.3.
N2-ODP-OPS-0106 rev 10, pgs 4-5 3.2

[3.4/3.8]
294001A105 ..(KA's)

ANSWER: 014 (1.00)

b.

REFERENCE:

NFL pg 16 & 17, and fig 13
EO-3.0

[3.0/3.7]

234000K505 ..(KA's)

ANSWER: 015 (1.00)

a.

REFERENCE:

RPS, pg 69, table 1
EO-3.0

[4.0/4.1]

212000A216 ..(KA's)

ANSWER: 016 (1.00)

c.

REFERENCE:

RPS, pg 23 & 24, sect III.A.1, and fig #5
EO-8.0

[3.8/4.1]

262001K306 ..(KA's)

ANSWER: 017 (1.00)

a.

REFERENCE:

EJS/ENS, pgs 23 &24, item 6.a.2, EO-8.0
N2-OP-72, pg 8, sect 3.3, load shedding

[3.4/3.6]

262001A304 ..(KA's)

ANSWER: 018 (1.00)

d.

REFERENCE:

TMS pgs 10 and 14 and 24, ESS preheat feedwater, less ESS gives lower feedwater temp.
EO-5.0
N2-SOP-34, sect 4.5

[3.7/3.8]

239002A106 ..(KA's)

ANSWER: 019 (1.00)

b.

REFERENCE:

RWM fig 10, EO-14.0.a,b,c
N2-OP-95A, rev 2 pg 34, ATT #6

[3.5/3.5]

201006K402 ..(KA's)

ANSWER: 020 (1.00)

b.

REFERENCE:

TS 3.1.4.1, pg 3/4 1-16
N2-OP-95A, pg 10, D.4.0,
RWM, EO-7.0.d and EO-16.0

[3.1/3.2]

201006G010 ..(KA's)

ANSWER: 021 (1.00)

a.

REFERENCE:

RMC, pg 51, CAUTION, EO-16.0
N2-OP-96, pg 11, D.5.0,

[3.2/3.2]

201002K408 ..(KA's)

ANSWER: 022 (1.00)

b.

REFERENCE:

RMC, pg 91-93, table #1 EO-14.c

[3.7/3.6]

215005A308 ..(KA's)

ANSWER: 023 (1.00)

b.

REFERENCE:

RCS, pg 36, 37, 38, sect #4, EO-4.c
N2-OP-29, rev 6, pg 7, sect 8

[3.7/3.9]

202001A211 ..(KA's)

ANSWER: 024 (1.00)

d.

REFERENCE:

RCS, pg 37, middle of page EO-6.0
N2-OP-29, rev 6, pg 7, sect 8.g

[3.1/3.2]

202002K108 ..(KA's)

ANSWER: 025 (1.00)

c.

REFERENCE:

RCS, pg 40, middle of page EO-4.c
RRS, pg 12, sect C
N2-OP-29, rev 6, pg 7, sect D.6.g

[3.4/3.4]

202001K105 ..(KA's)

ANSWER: 026 (1.00)

a.

REFERENCE:

RMC pg 20, middle of page, restricted to notch drive only and no rod block occurs unless pos 44 is also bad.
EO-3.0 and 13.0
Concerning TS 3.1.4.2.a, the RSCS is not inoperable by one reed switch.

[3.1/3.3]

201004A201 ..(KA's)

ANSWER: 027 (1.00)

a.

REFERENCE:

CSH, pg 10, sect E EO-2.0 and 3.4.a,b,c

[3.6/3.6]

209002A402 ..(KA's)

ANSWER: 028 (1.00)

d.

REFERENCE:

N2-OP-33, rev 5, pg 5, 3.4,
CSH obj EO-6.0

[3.2/3.7]

209002G010 ..(KA's)

ANSWER: 029 (1.00)

d.

REFERENCE:

RCIC, pg 99, table 3, A.1.e EO-2.0 and 3.0

[3.8/3.7]

217000A201 ..(KA's)

ANSWER: 030 (1.00)

a.

REFERENCE:

RCIC, pg 31, sect 4.b
N2-OP-35, pg 18, f.3, note #2, test starts IAW N2-OSP-ICS-Q002, and this requires open steam valve not manual initiate pushbutton.
RCIC obj, EO-7.d

[3.6/3.6]

217000A404 ..(KA's)

ANSWER: 031 (1.00)

d.

REFERENCE:

ADS, pg 8 and 9, sect C, EO-2.0, 3.0, 4.a,b,c

[3.4/3.6]

218000K606 ..(KA's)

ANSWER: 032 (1.00)

c.

REFERENCE:

ADS, pg 8 and 9, sect C, and pg 13, FIG #5, EO-2.0, 3.0, 4.a,b,c

[3.8/4.0]

218000K403 ..(KA's)

ANSWER: 033 (1.00)

b.

REFERENCE:

ARC, pg 24, item C.1.a, EO-4.0 all

[3.3/3.3]

271000A301 ..(KA's)

ANSWER: 034 (1.00)

b.

REFERENCE:

ARC, pg 27, item V.A.2, EO-6.0 all

[3.1/3.2]

271000G010 ..(KA's)

ANSWER: 035 (1.00)

b.

REFERENCE:

NMS, pg 41, 42, 43, sections 6 & 7, EO-3.0

[3.2/3.3]

215005A403 ..(KA's)

ANSWER: 036 (1.00)

a.

REFERENCE:

NMS, pg 53, sect 4, middle of page, EO-4.a,d

[3.1/3.2]

215004A405 ..(KA's)

ANSWER: 037 (1.00)

d.

REFERENCE:

NMS, pg 52, 53, sect 4, and pg 115, table 3, EO-4.c

[3.6/3.7]

215004K101 ..(KA's)

ANSWER: 038 (1.00)

d.

REFERENCE:

N2-OP-73B, rev 4, pg 4, item d.7, and pg 16 & 19
BYS/BWS EO-6.e

[3.1/3.4]

263000K201 ..(KA's)

ANSWER: 039 (1.00)

b.

REFERENCE:

N2-Op-30, rev 9, pg 9, item 3.0.m
RPS, pg 26, d and e eo-5.0

[3.9/4.0]

212000A214 ..(KA's)

ANSWER: 040 (1.00)

c.

REFERENCE:

N2-OP-74B, rev 4, pg 4, item d.7, and pg 16 & 19 EO-8.0

[3.4/3.8]

263000K301 ..(KA's)

ANSWER: 041 (1.00)

c.

REFERENCE:

SLS, pg 13, 14, 15, sect C interlocks, figs #1 and #2, obj EO-8.0

[3.6/3.7]

211000A104 ..(KA's)

ANSWER: 042 (1.00)

d.

REFERENCE:

SLS, pg 22, 23, 4.a.1.e obj EO-7.d

[3.6/3.7]

211000A101 ..(KA's)

ANSWER: 043 (1.00)

b.

REFERENCE:

RRS, pg 42, table #1 and fig #2 Obj EO-5.0

[3.6/3.7]

202001K506 ..(KA's)

ANSWER: 044 (1.00)

a.

REFERENCE:

RRS, pg 9 & 10, section A, and fig #1 Obj EO-4.a

[4.5/4.5]

201001K205 ..(KA's)

ANSWER: 045 (1.00)

b.

REFERENCE:

N2-OP-61B, rev 6, pg 13, note #1
GTS, pg 22, sect #2, EO-8.0, must have initiation signal AND EITHER ans b or RB diff press low signal.

[3.7/3.8]

261000K401 ..(KA's)

ANSWER: 046 (1.00)

a.

REFERENCE:

N2-OP-61B, rev 6, pg 15, note #1
GTS, pg 22, sect #2, EO-6.0

[3.0/2.9]

261000A304 ..(KA's)

ANSWER: 047 (1.00)

c.

REFERENCE:

FHE, pg 40, sect 6, last para, EO-3.0, 4.0, 5.0

[3.1/3.7]

234000A302 ..(KA's)

ANSWER: 048 (1.00)

d.

REFERENCE:

TS pg 3/4 1-12, sect 4.1.3.6
RDM, EO-6.0, 8.0

[3.9/3.9]

201002G010 ..(KA's)

ANSWER: 049 (1.00)

c.

REFERENCE:

RDM, pg 32, sect C, middle of page EO-4.0

[3.6/3.7]

201003K404 ..(KA's)

ANSWER: 050 (1.00)

a.

REFERENCE:

HVC, pg 39, sect 4.a EO-7.d

[3.7/4.1]

272000K402 ..(KA's)

ANSWER: 051 (1.00)

b.

REFERENCE:

RCS, pg 23, 3.d and e, pg P68a item #16 EO-8.0

[3.1/3.1]

290002K307 ..(KA's)

ANSWER: 052 (1.00)

d.

REFERENCE:

HVT pg 21, EO-8.0
94 smod

[3.3/3.4]

288000G007 ..(KA's)

ANSWER: 053 (1.00)

a.

REFERENCE:

RDS pg 13, 2nd para EO-4.a

[3.8/3.9]

201001A204 ..(KA's)

ANSWER: 054 (1.00)

b.

REFERENCE:

RMC, pg 13, item 6.f EO-2.g

[3.2/3.1]

214000A302 ..(KA's)

ANSWER: 055 (1.00)

d.

REFERENCE:

RMC, pg 13, item 6.f EO-2.0

[3.8/3.8]

214000A402 ..(KA's)

ANSWER: 056 (1.00)

d.

REFERENCE:

Steam tables
N2-EOP-RPV EO-7.0

[3.6/3.8]

216000K507 ..(KA's)

ANSWER: 057 (1.00)

d.

REFERENCE:

RPS, pg 69,70, table 1 "bypassed w/ mode switch NOT in RUN"
EO-4.0c, 5.0

[3.7/3.9]

212000K101 ..(KA's)

ANSWER: 058 (1.00)

b.

REFERENCE:

ISC, pg 12, sect F, GP 1 EO-2.0

[3.5/3.5]

223002A302 ..(KA's)

ANSWER: 059 (1.00)

a.

REFERENCE:

N2-OP-83, rev 2, pg 7, item D.3.0
N2-OP-71D, rev 1, pg 6, item D.2.0
ARM 852503 does not identify this condition, this is the only UPS that has this effect.
obj VBB EO-8.0 and ISC EO-8.0

[3.2/3.3]

223002K607 ..(KA's)

ANSWER: 060 (1.00)

c.

REFERENCE:

RHS, pg 18, EO-4.c, does not address reset of hi DW press signal for valve logic

[3.6/3.8]

226001A101 ..(KA's)

ANSWER: 061 (1.00)

c.

REFERENCE:

TS 3.6.5.3, pg 6-43
TS 3.6.5.1, pg 6-38
Obj SSC EO-3.c

[3.8/4.0]

290001K603 ..(KA's)

ANSWER: 062 (1.00)

b.

REFERENCE:

N2-OP-31, rev 9, pg 13, D.27
RHS, obj EO-6.0

[3.1/3.1]

205000A409 ..(KA's)

ANSWER: 063 (1.00)

c.

REFERENCE:

RHS , pgs 16-18 and 27-31 EO-7.0
94 smod

[4.2/4.2]

203000K401 ..(KA's)

ANSWER: 064 (1.00)

a.

REFERENCE:

EGC, pg 34, sect a, and pg 77, bottom EO-7.0
94 smod

[3.7/4.1]

264000A209 ..(KA's)

ANSWER: 065 (1.00)

b

REFERENCE:

N2-SOP-30, rev 0, pg 5, sect 4.3.2

[3.6/3.6]

295022A102 ..(KA's)

ANSWER: 066 (1.00)

a.

REFERENCE:

RRS, fig #3, drains to the RBEDT
N2-SOP-97, pg 14, item 5.2.4

[3.7/4.2]

295034A202 ..(KA's)

ANSWER: 067 (1.00)

a.

REFERENCE:

N2-OP-101A

[3.3/3.7]

295014K102 ..(KA's)

ANSWER: 068 (1.00)

c.

REFERENCE:

N2-OP-31. rev 9, pg 11, D.5
N2-SOP-31, rev 00, pg 4, 4.1.10, 4.1.6.b

[3.3/3.4]

295021K301 ..(KA's)

ANSWER: 069 (1.00)

d.

REFERENCE:

N2-SOP-09, rev 00, pg 4, 5.2

[3.2/3.2]

295002G007 ..(KA's)

ANSWER: 070 (1.00)

c.

REFERENCE:

N2-SOP-09, rev 00, pg 3, 4.4

[3.2/3.3]

295002K204 ..(KA's)

ANSWER: 071 (1.00)

a.

REFERENCE:

N2-SOP-13, pg 1 & 2, sect 1.0 & 3.0

[3.4/3.6]

295018K202 ..(KA's)

ANSWER: 072 (1.00)

c.

REFERENCE:

RCS, pg 11, sect D

[3.5/3.8]

295010K304 ..(KA's)

ANSWER: 073 (1.00)

d.

REFERENCE:

N2-SOP-78, rev 00, pg 7, 3.6.1.b

[3.7/3.8]

295016K302 ..(KA's)

ANSWER: 074 (1.00)

b.

REFERENCE:

EOP bases RPV CONTROL, pg 52,

[3.4/3.7]

295006K102 ..(KA's)

ANSWER: 075 (1.00)

d.

REFERENCE:

N2-EOP-MSL entry conditions

[4.2/4.5]

295038G011 ..(KA's)

ANSWER: 076 (1.00)

b.

REFERENCE:

EOP-C2 Emergency RPV Depressurization bases, sect D, pg 28

[3.9/3.9]

295024A108 ..(KA's)

ANSWER: 077 (1.00)

d.

REFERENCE:

EOP-C2 bases Emergency RPV depressurization, sect J, pg 14
EOP-6, att 18

[4.5/4.5]

295031K212 ..(KA's)

ANSWER: 078 (1.00)

a.

REFERENCE:

"N2-SOP-34 Stuck Open SRV", rev 00, pg 3, 4.1
Note EOP-PC states "BEFORE 110", SOP 34 states "REACHES 110" these are inconsistent.

[4.4/4.6]

295026G011 ..(KA's)

ANSWER: 079 (1.00)

c.

REFERENCE:

RVI pg 15, sect F, level 8 is 202, narrow and wide range only go to 205 inches, shutdown calib cold.

[3.9/3.9]

295008A201 ..(KA's)

ANSWER: 080 (1.00)

a.

REFERENCE:

N2-SOP-23, rev 00, pg 2, immed action 3.1.2

[3.8/3.6]

295005G010 ..(KA's)

ANSWER: 081 (1.00)

a.

REFERENCE:

MSS, pg 8, 2nd paragraph

[4.0/4.1]

295024K208 ..(KA's)

ANSWER: 082 (1.00)

d.

REFERENCE:

NBD, pg 12 RB floor drains
N2-EOP-SC "Secondary Containment Control" entry conditions

[3.7/3.5]

295036G011 ..(KA's)

ANSWER: 083 (1.00)

c.

REFERENCE:

N2-SOP-29, pg 2, 3.3 and SOP 101C, pg 2, 3.2, 3.3
This is immediate action, P/F map not needed

[3.8/3.7]

295001G010 ..(KA's)

ANSWER: 084 (1.00)

b.

REFERENCE:

TS 3.6.1.1, pg 6-1, and 3.6.5.1., pg 6-38, PC required >200 deg F,
TS, pg 1-11, mode change from 4 to 3
N2-SOP-31, pg 5, 4.2.2

[3.2/3.9]

295021G008 ..(KA's)

ANSWER: 085 (1.00)

a.

REFERENCE:

N2-SOP-08. pg 2, 3.4 immediate action

[4.0/3.9]

295014G010 ..(KA's)

ANSWER: 086 (1.00)

b.

REFERENCE:

EOP usage sect C, page 9 and 10
EOP, C5 and C1

[4.6/4.7]

295031K101 ..(KA's)

ANSWER: 087 (1.00)

c.

REFERENCE:

N2-OP-39, rev 00, pg 4, action 3.4

[3.8/3.9]

295023G010 ..(KA's)

ANSWER: 088 (1.00)

b.

REFERENCE:

EOP-RPV bases RPV control, sect D, pg 64

[4.2/4.3]

295037K307 ..(KA's)

ANSWER: 089 (1.00)

b.

REFERENCE:

Facility replacement question - TRAIN Q3462

[4.0/3.9]

295014G010 ..(KA's)

ANSWER: 090 (1.00)

a.

REFERENCE:

RPS, pg 36, and pg 37

[3.4/3.5]

295005K302 ..(KA's)

ANSWER: 091 (1.00)

b.

REFERENCE:

N2-SOP-04, rev 00, pg 4, immed action 3.3

[3.2/3.4]

295004G010 ..(KA's)

ANSWER: 092 (1.00)

b.

REFERENCE:

EOP bases C5, sect M, pg 35,

[3.6/3.8]

295030A101 ..(KA's)

ANSWER: 093 (1.00)

a.

REFERENCE:

N2-OP-29, rev, 6, pg 32, sect 3.2 and 4.0

[3.1/3.1]

295018K303 ..(KA's)

ANSWER: 094 (1.00)

c.

REFERENCE:

SPB bases, pg 32, sect 2
N2-SOP-03, rev 3, pg 51, item 5.5.7.8

[3.8/4.0]

295003K106 ..(KA's)

ANSWER: 095 (1.00)

a.

REFERENCE:

CSH pg, pg 77, table 5 and EGS, pg 37

[4.2/4.3]

295003A102 ..(KA's)

ANSWER: 096 (1.00)

c.

REFERENCE:

N2-EOP-SC bases, section F, pg 11

[3.8/4.4]

295033G012 ..(KA's)

ANSWER: 097 (1.00)

d.

REFERENCE:

N2-SOP-08, rev 00, pg 2, sects 3.1,3.2
N2-SOP-19, rev 00, pg 3, sect, 3.2

[3.7/3.4]

295019G010 ..(KA's)

ANSWER: 098 (1.00)

c.

REFERENCE:

N2-OP-29, rev 6, pg 29, item 9.0

[3.5/3.6]

295001A201 ..(KA's)

ANSWER: 099 (1.00)

a.

REFERENCE:

N2-SOP-78, rev 00, pg 5, item 3.4.5
94 smod

[3.8/3.9]

295016A101 ..(KA's)

ANSWER: 100 (1.00)

d.

REFERENCE:

ISC pg 12, MSIV isol on low press, 785 psig
N2-SOP-23, rev 00
EOP-6, pg 3, 4.0, Def of Verify, confirm and take

[3.8/4.1]

295037K210 ..(KA's)

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

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

CANDIDATE'S NAME: _____

FACILITY: Nine Mile Point 2

REACTOR TYPE: BWR-GE5

DATE ADMINISTERED: 96/07/09

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	%
100.00	_____	___ % 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 K E Y

MULTIPLE CHOICE

001	c
002	a
003	a
004	c
005	a
006	b
007	d
008	d
009	a
010	c
011	b
012	a
013	d
014	a
015	a
016	c
017	b
018	b
019	a
020	c
021	b
022	d
023	b
024	b
025	c
026	d
027	c
028	a d CES
029	a
030	d
031	a
032	c
033	c
034	d
035	b
036	b
037	d
038	d
039	b
040	c
041	d
042	b
043	c
044	d
045	c

A N S W E R K E Y

046 a

MULTIPLE CHOICE

047 b
048 d
049 a
050 b
051 d
052 d
053 b
054 a
055 c
056 c
057 c
058 b
059 a
060 a
061 c
062 d
063 c
064 a
065 c
066 b
067 d
068 b
069 b
070 d
071 d
072 b
073 d
074 a
075 c
076 a
077 a
078 d
079 c
080 b
081 a
082 b
083 a
084 c
085 c
086 b
087 b
088 a
089 b
090 b

A N S W E R K E Y

091 a

MULTIPLE CHOICE

092 d

093 c

094 a

095 c

096 b

097 d

098 a

099 a

100 d

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

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	___
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025	a	b	c	d	___
026	a	b	c	d	___
027	a	b	c	d	___
028	a	b	c	d	___
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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	___
038	a	b	c	d	___
039	a	b	c	d	___
040	a	b	c	d	___
041	a	b	c	d	___
042	a	b	c	d	___
043	a	b	c	d	___
044	a	b	c	d	___
045	a	b	c	d	___

ANSWER SHEET

Multiple Choice (Circle or X your choice)

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

046	a	b	c	d	___	068	a	b	c	d	___
MULTIPLE CHOICE						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	___
061	a	b	c	d	___	084	a	b	c	d	___
062	a	b	c	d	___	085	a	b	c	d	___
063	a	b	c	d	___	086	a	b	c	d	___
064	a	b	c	d	___	087	a	b	c	d	___
065	a	b	c	d	___	088	a	b	c	d	___
066	a	b	c	d	___	089	a	b	c	d	___
067	a	b	c	d	___	090	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.

091 a b c d ___

MULTIPLE CHOICE

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 ___

099 a b c d ___

100 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 will result in a denial of your application and could result in more severe penalties.

2. After you complete the examination, 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.

3. To pass the examination, you must achieve a grade of 80 percent or greater.

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

5. There is a time limit of 4 hours for completing the examination.

6. Use only black ink or dark pencil to ensure legible copies.

7. Print your name in the blank provided on the examination cover sheet and the answer sheet.

8. Mark your answers on the answer sheet provided and do not leave any question blank.

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

10. Restroom trips are permitted, but only one applicant at a time will be allowed to leave. Avoid all contact with anyone outside the examination room to eliminate even the appearance or possibility of cheating.

11. When you complete the examination, assemble a package including the examination questions, examination aids, and answer sheets and give it to the examiner or proctor. Remember to sign the statement on the examination cover sheet.

12. After you have turned in your examination, leave the examination area as defined by the examiner.

QUESTION: 003 (1.00)

A condition exists that requires access to the Master XH/XR keys in the "break-to-enter" key box in the SSS office.

As SSS, what administrative action(s) are required following use of the keys?

a. Notify the Radiation Protection Chief Technician immediately.

b. Notify the Shift Security Supervisor immediately, and initiate a Deviation Event Report (DER) to investigate and document use.

c. Obtain any Radiation Protection Technician to inventory and reseal the "break-to-enter" key box.

d. Notify the Radiation Protection Manager on the next scheduled work day, and initiate a DER to investigate and document use.

QUESTION: 004 (1.00)

The following conditions exist:

- A Red Mark Up (RMU) has been issued against a particular pump.
- The alternate pump has just failed.
- The SSS determines that pump with the RMU must be operated to provide cooling to in-service equipment.
- Attempts to locate the Markup Person or his supervisor have been unsuccessful.

What can be done to return the pump with the RMU to service?

a. Nothing. Since a RMU is in place, only the Markup Person or the responsible supervisor can authorize removal.

b. The Manager Operations must approve removal of the markup after the system has been walked down.

c. The SSS can take full responsibility for the markup and assume the role of the Markup Person for removal.

d. The CSO has responsibility to release the markup in lieu of the Markup Person.

QUESTION: 005 (1.00)

The following conditions exist:

- A Markup has been issued.
- The Markup Person considers that the walkdown by him is NOT practicable and desires a waiver of this requirement.

Which of the following is the MINIMUM required action?

a. The CSO and the SSS must concur and the waiver must be documented on the Markup cover sheet.

b. Either the CSO or the SSS must concur and the waiver must be documented on the Markup cover sheet.

c. The Markup person must notify the work leader and document the waiver on the Markup cover sheet.

d. The Markup person must perform the walkdown once the markup has been issued.

QUESTION: 006 (1.00)

The following condition exists:

- You are at home and have just completed a meal which included a glass of wine.
- You receive a call-out to fill a shift license position for an unexpected operator absence.
- The SSS reports that no other individual is available.
- You feel fit for work and capable of driving (no impairment).

Concerning the alcohol consumption, you are personally required to:

a. refuse to accept the call out.

b. inform the SSS during the call-out conversation that you have been drinking alcohol.

c. report to security and request a breathalizer alcohol test to establish fitness for duty.

d. report to the control room and inform the SSS of the alcohol intake.

QUESTION: 007 (1.00)

Which of the following is an SSS responsibility for a fire in the protected area?

a. Report to the fire scene command post and act as liaison with the Control Room CSO.

b. Determine the need to contact Oswego County Fire Control to obtain assistance from offsite Fire Departments.

c. Contact the Radiation Protection Supervisor to provide a Radiation Protection Technician if the fire is in a controlled area.

d. Authorize departure of offsite Fire Department personnel and equipment after the fire is extinguished.

QUESTION: 008 (1.00)

When may a Master or Satellite Master copy of a procedure be used in lieu of a Controlled Working Copy?

a. Data is being taken for observations and the data sheet supports independent use.

b. The Controlled Working Copy becomes radiologically contaminated.

c. Independent verification of a completed task is being performed.

d. Task implementation does NOT require sign-offs.

QUESTION: 009 (1.00)

Which of the following requires the issuance of a Type 1 Immediate Procedure Change Evaluation (PCE)?

With the plant in:

a. Operational Condition 1, an operator performing N2-OSP-MSS-Q002 "MSIV PARTIAL TEST AND FUNCTIONAL TEST OF RPS MSIV CLOSURE IN OPERATIONAL CONDITION 1 OR 2" discovers the next step for partial stoking directs placing the control switch for MSIV-6B in CLOSE.

b. Operational Condition 2, an operator discovers that EPIP-EPP-09 "DETERMINATION OF CORE DAMAGE UNDER ACCIDENT CONDITIONS" specifies an atmospheric pressure of 15.7 psig.

c. Operational Condition 3, an operator discovers that GAP-OPS-01 "ADMINISTRATION OF OPERATIONS" states the Chief Shift Operator (CSO) has the authority to override engineered safety features (ESFs) in an emergency.

d. Operational Condition 4, an operator performing a JPM discovers that procedure N2-OP-62 "DBA HYDROGEN RECOMBINER" aligns valves so that BOTH Recombiner 1A and 1B suction flow paths are opened.

QUESTION: 010 (1.00)

By definition, the term "Primary System," when used within the EOPs, refers to any system:

a. that can reduce pressure in the Primary Containment.

b. connected to the RPV and contains radioactive water.

c. connected directly to the RPV that has a reduced leak rate if RPV pressure is lowered.

d. supplied by General Electric Corporation as part of the Nuclear Steam Supply System (NSSS).

QUESTION: 011 (1.00)

A review of operating logs following a loss of feedwater heating transient shows that MCPR reached 1.05 during the transient. Which of the following describes MINIMUM action required concerning plant operation?

a. Engineering analysis is required within 4 hours for continued operations.

b. The reactor is to be placed in HOT SHUTDOWN within 2 hours.

c. Thermal power must be reduced to LESS THAN 25% within the next 15 minutes.

d. Immediately scram the reactor.

QUESTION: 012 (1.00)

The following conditions exist:

- Reactor Power is 80%.
- A trainee, under the direction of the CSO, is currently raising reactor power using recirculation flow.
- A situation occurs that requires a reactor scram.

Which of the following describes the action to be taken?

a. The CSO placing the mode switch in SHUTDOWN.

b. The CSO immediately initiating both divisions of Alternate Rod Insertion.

c. The trainee immediately placing the mode switch in SHUTDOWN.

d. When directed by the CSO, the trainee arming and depressing BOTH Manual Scram pushbuttons.

QUESTION: 013 (1.00)

What is NMPC policy for Unit-2 licensed personnel shift staffing while in the Hot Shutdown condition?

a. Two SRO licenses and one RO license.

b. One SRO license and one RO license.

c. One SRO license and two RO licenses.

d. Two SRO licenses and two RO licenses.

QUESTION: 014 (1.00)

The following conditions exist:

- The reactor is at 100% steady-state power.
- RPS channel "A" is tripped for a surveillance and cannot be reset within one hour.
- APRM "B" fails HIGH and remains HIGH.
- NO automatic actions have occurred.

Select the required action.

a. Commence a plant shutdown.

b. Trip RPS "B".

c. Enter N2-EOP-RPV, "RPV Control"

d. Enter N2-EOP-C5, "Level/Power Control".

UESTION: 015 (1.00)

Which of the following describes the Extended Operating Domain limitation?

Operation is allowed above:

a. the 100% Rod line provided rated core thermal power does NOT exceed 100%.

b. the 100% Rod line provided core flow does NOT exceed 105%.

c. 105% core flow provided rated core thermal power does NOT exceed 100%.

d. 100% rated core thermal power provided rated core flow does NOT exceed 100%.

)UESTION: 016 (1.00)

The following condition exists:

- The control room is staffed at "normal" manpower levels.
- An emergency condition has occurred.

Once relieved as the Site Emergency Director (SED), the SSS is required to:

a. implement Protective Action Recommendations and Emergency Notifications.

b. make a site announcement of his turnover to the SED.

c. verify EOP actions already taken.

d. inform plant management.

QUESTION: 017 (1.00)

An ALERT has been declared, which of the following describes the required emergency notifications?

a. State and local agencies, then the NRC, must be notified within 5 minutes after declaration of the ALERT NOT to exceed ONE hour from the initiating event.

b. The NRC must be notified as soon as possible after notification of state and local agencies, NOT to exceed ONE hour after declaration of the ALERT.

c. State and local agencies must be notified within 15 minutes after declaration of the ALERT. The NRC notification may be delayed up to ONE hour after state and local notifications.

d. The NRC must be notified within ONE hour after declaration of the ALERT. State and local agencies must be notified immediately thereafter.

QUESTION: 018 (1.00)

Which of the following describes a properly oriented fuel bundle?

a. The identification boss on the fuel assembly handle points away from the control rod.

b. The channel spacer buttons are adjacent to the control rod and adjacent to each other.

c. Serial number on the handle is readable from the outside edge of the four bundle fuel cell.

d. The channel fasteners are located on the outside edge of the four bundle fuel cell.

QUESTION: 019 (1.00)

The following conditions exist:

- The plant is operating at 100% power.
- An operator initiated scram becomes necessary.
- The reactor mode switch is taken from RUN to SHUTDOWN.
- All plant protective systems respond as designed.

Select the FIRST Reactor Protection System scram signal generated.

a. APRM Upscale Neutron Flux (Setdown).

b. Mode Switch in SHUTDOWN.

c. IRM Upscale Trip.

d. APRM Flow Biased.

QUESTION: 020 (1.00)

One of the four white Pilot Scram Valve Solenoid lights on P603 for RPS channel "A" is out due to a blown fuse. All RPS "B" white Pilot Scram Valve Solenoid lights are energized.

Which of the following describes the current status of the control rods?

a. 1/4 of control rod scram solenoids fed by RPS "A" are receiving alternate power.

b. 1/4 of control rod scram solenoids fed by RPS "A" should have scrammed.

c. 1/4 of all control rods have received a 1/2 scram.

d. 1/4 of all control rods should have scrammed.

QUESTION: 021 (1.00)

All DC control power is lost to the 4160 Volt Circuit Breaker of an RHR pump needed for injection. Bus power (4160 VAC) for the breaker is still available.

Which of the following manual operations may be physically performed at the breaker without use of breaker operating tools?

The breaker may be:

a. closed only.

b. closed and tripped open again.

c. closed then tripped and closed again.

d. tripped open (if closed) and NOT closed again.

QUESTION: 022 (1.00)

With the reactor at 100% power, which of the following would be an indication of an open Safety Relief Valve (SRV)?

a. Reactor pressure trending downward.

b. SRV Tailpipe temperature stable at 500 deg F.

c. Total indicated steam flow increase.

d. Reactor thermal power increase.

QUESTION: 026 (1.00)

If total feedwater flow drops below the reactor recirculation interlock setpoint, the Reactor Recirculation pumps will downshift to slow speed in order to prevent:

a. excessive axial thrust on the pump.

b. inaccurate wide range level indication.

c. recirculation pump cavitation.

d. flow control valve cavitation.

QUESTION: 027 (1.00)

Which of the following signals will transfer the Reactor Recirculation pumps to slow speed (LFMG) and will trip the pump after 25 seconds, if APRM power is too high?

a. EOC-RPT Logic.

b. Low feedwater flow.

c. High vessel dome pressure.

d. Pump discharge valves NOT full open.

QUESTION: 028 (1.00)

The following conditions exist:

- A reactor startup is in progress.
- An attempt to withdraw a control rod from position 40 to position 48 was initiated using single notch withdrawal.
- The reed switch associated with position 42 did NOT operate.
- The indicated rod position is blank.

Select the appropriate method to continue with the startup.

a. Continue the rod withdrawal .

b. Insert the rod to position 40 and then depress CONTINUOUS WITHDRAW pushbutton until the rod reaches position 44.

c. Bypass the Rod Sequence Control System function for that control rod.

d. Install a substitute position for the rod at position 42.

QUESTION: 029 (1.00)

The High Pressure Core Spray (CSH) Suppression Pool Suction Valve (MOV-118) will automatically open when:

a. a low CST "B" level or high suppression pool level exists.

b. the CSH CST Suction valve (MOV-101) automatically goes closed with a CSH initiation signal present.

c. a CSH initiation signal is present AND either a low CST level or high suppression pool level exists.

d. the CSH CST Suction valve (MOV-101) is automatically or manually full closed, regardless of CSH initiation conditions.

QUESTION: 030 (1.00)

Which of the following will prevent RCIC discharge to the CST through the test line return valves FV-108 and MOV-124?

a. The CST suction valve MOV-129 is open.

b. RCIC minimum flow valve MOV-143 is open.

c. CST level is greater than 102 inches.

d. Reactor level is less than 102 inches.

QUESTION: 031 (1.00)

Which of the following requires local manual reset at the RCIC turbine?

a. Any RCIC turbine trip with a DIV I LOCA signal sealed in.

b. RCIC mechanical overspeed trip and trip from manual system isolation.

c. RCIC mechanical overspeed trip and trip from automatic system isolation.

d. RCIC mechanical overspeed trip and manual trip from panel 601.

QUESTION: 032 (1.00)

The following conditions exist:

- The High Pressure Core Spray (CSH) has automatically initiated on a valid signal.
- EOPs have been entered.
- Reactor water level is approaching Level 8.
- An operator is directed to place the "CSH Keylock Test Switch" on panel 2CEC*PNL625 in the TEST position.

Which of the following describes subsequent operation of the CSH Injection Valve MOV-107?

The valve:

a. has no automatic features and must be throttled open or closed.

b. will automatically close on high water level but must be throttled open or closed.

c. will automatically open on low level but NOT automatically close on high level.

d. will automatically open on low level but must be throttled open or closed thereafter.

QUESTION: 033 (1.00)

The following conditions exist:

- A large reactor coolant leak has occurred.
- LPCS and all RHR pumps are running.
- The Automatic Depressurization System automatically actuated.
- All ADS SRVs are open.
- Reactor water level is now steady at 150 inches.
- Reactor pressure is 200 psig.

If the DIV I and II ADS LOGIC INITIATION SEAL-IN RESET pushbuttons are depressed and released which of the following describes the result on the Automatic Depressurization System?

The ADS SRVs will:

a. close and then reopen when the pushbuttons are released.

b. close and then reopen after 105 seconds.

c. close and remain closed.

d. remain open.

QUESTION: 034 (1.00)

The control room has been evacuated and control of the ADS SRVs has been transferred to the Remote Shutdown Panel. If a valid automatic ADS signal is generated, which ADS valves will open?

a. Only the three non-transferred ADS valves will open.

b. Only the four transferred ADS valves will open.

c. All seven ADS valves will open.

d. None of the ADS valves will open.

QUESTION: 035 (1.00)

Operation of the Condenser Air Removal Pumps P1A/B is prohibited above 5% APRM average power because:

a. there is no provision for radioactive monitoring of the discharge.

b. this prevents buildup of explosive hydrogen concentrations.

c. the pumps cannot generate sufficient vacuum for turbine operation.

d. the pumps cannot remove sufficient gases when greater than 5% power.

QUESTION: 036 (1.00)

The APRM Channel A meter function switch is placed in the "COUNT" position.

Which of the following is the MINIMUM indication for the APRM to be considered operable assuming the level requirements are met?

a. 50%

b. 70%

c. 80%

d. 100%

QUESTION: 037 (1.00)

Which of the following is independent of the reactor mode switch position?

a. SRM Downscale Rod Block.

b. SRM Upscale Rod Block.

c. SRM Detector NOT Full In Rod Block.

d. SRM Upscale Scram.

QUESTION: 038 (1.00)

With the reactor power at 3%, which of the following will occur if both divisions of the non-safety related 24 VDC electrical system are lost?

a. All stack gas effluent monitoring will be lost.

b. MSIVs will receive a half group I isolation signal.

c. Recirculation Flow control valves will lock up.

d. The reactor will scram.

QUESTION: 039 (1.00)

While at power, the actual water level in ONE Scram Discharge Volume (SDV) exceeds the high-high level setpoint (49 inches). In addition to alarms, which of the following will result?

a. Only a half reactor scram.

b. A full reactor scram.

c. The SDV vent and drain valves open.

d. Only a control rod block.

QUESTION: 040 (1.00)

Which of the following describes the effect on Diesel Generator 2EGS*EG2 (CSH) if battery and charger power to Division Three 125 VDC is lost?

a. If running, the diesel will continue to operate but output breaker controls are lost.

b. If running, the diesel will continue to operate but some protection for the engine and output breaker is lost.

c. The diesel will trip or fail to start and cannot be locally emergency started.

d. The diesel will trip or fail to start until DC power from 2CES*IPNL414 is manually shifted to Division Two (SWG002B).

QUESTION: 041 (1.00)

The following conditions exist:

- An ATWS is in progress.
- Reactor pressure is 1000 psig.
- The Standby Liquid Control System (SLS) is initiated.

Which of the following is positive indication that the SLS system is injecting?

a. Both white squib continuity lights on P601 are extinguished.

b. At least one SLS pump is running.

c. The SLS pump discharge pressure is 1000 psig.

d. The SLS tank level is decreasing.

QUESTION: 042 (1.00)

Which of the following describes the effect when the Redundant Reactivity Control System (RRS) system is manually initiated instead of automatically initiated?

a. The recirculation pumps trip immediately from either speed.

b. The recirculation pumps do NOT automatically downshift or trip.

c. The Standby Liquid Control System initiates without a 98 second delay.

d. The feedwater runback feature occurs without a 25 second delay.

QUESTION: 043 (1.00)

With the Refueling Platform over the reactor vessel, which of the following, BY ITSELF, will initiate a rod withdraw block for any selected rod?

a. Auxiliary Hoist loaded.

b. Any rod NOT fully inserted.

c. Mode switch in STARTUP.

d. Grapple NOT engaged.

QUESTION: 044 (1.00)

Which of the following describes a requirement for conducting control rod coupling checks?

Coupling checks must be completed:

a. for all control rods, prior to reactor criticality after any shutdown.

b. for any control rod that has received a rod drift alarm.

c. only the first time that each control rod reaches position 48 after a reactor startup.

d. anytime a control rod is withdrawn to the full out position during operation.

QUESTION: 045 (1.00)

Which of the following describes the response of a control rod if the ball-check valve in the drive mechanism is stuck closed during a scram?

(Assume normal HCU operation and accumulator pressure.)

The control rod will:

a. insert until accumulator pressure is less than reactor pressure.

b. NOT insert if accumulator pressure is less than 900 psig.

c. scram slower than normal after accumulator pressure is less than reactor pressure.

d. have no change in the scram insertion speed.

QUESTION: 046 (1.00)

IDENTIFY the Process Radiation Monitor system (RMS) that WILL cause an automatic action when excess radioactivity is detected, but does NOT prevent a radioactive release.

a. Control Room Ventilation RMS

b. Service Water Discharge RMS

c. Condenser Air Removal Pump Exhaust RMS

d. Offgas Pretreatment Discharge RMS

QUESTION: 047 (1.00)

Which of the following is indication of a reactor recirculation jet pump failure (loss of the nozzle)?

Indicated recirculation loop flow (recorder B35-R614 on P-602) in the loop with the failed jet pump will:

a. increase and core thermal power will increase.

b. increase and indicated total core flow (B22-R613 on P-603) will increase.

c. decrease and indicated total core flow (B22-R613 on P-603) will increase.

d. decrease and main generator output will decrease.

QUESTION: 048 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- The main steam tunnel fan (2HVT-FN11) trips on motor overload and cannot be restarted.

Which of the following describes the expected result

a. The standby turbine building supply fan (FN1A,B,C) will automatically start on high steam tunnel temperature.

b. The standby turbine building exhaust fan (FN2A,B,C) will automatically start on high steam tunnel temperature.

c. Steam tunnel unit coolers will automatically start when local temperature reaches 85 deg F.

d. The Main Steam Isolation Valves will isolate on high steam tunnel temperature.

QUESTION: 049 (1.00)

Which of the following describes automatic operation of the in-service control rod drive Flow Control Valve (FV 6A/B) immediately after a scram?

FV 6A/B will:

a. receive a close signal.

b. receive an open signal.

c. open to maintain the flow setting.

d. remain in the pre-scram position until the scram is reset.

QUESTION: 050 (1.00)

Following an automatic reactor scram, the BLUE light for one control rod on the full core display is NOT illuminated.

What does this indicate for the control rod in question?

a. The control rod is NOT at position 00.

b. At least one scram valve is NOT open.

c. The green "FULL IN" indication is NOT valid.

d. Reed switch S52 indication is lost.

QUESTION: 051 (1.00)

The following conditions exist:

- The reactor is in mode 5.
- All fuel is reloaded.
- Temperature is being maintained at 140 Deg F.

Which of the following is a core alteration?

a. Withdrawal of one Source Range Monitor (SRM).

b. Installation of a special moveable SRM detector.

c. Movement of a special moveable SRM detector.

d. Withdrawal of a control rod.

QUESTION: 052 (1.00)

Identify the set of conditions for which ALL reactor water level indicators should be considered invalid.

	DRYWELL TEMPERATURE	RPV PRESSURE
a.	200 degrees F,	30 psig
b.	270 degrees F,	40 psig
c.	325 degrees F,	90 psig
d.	350 degrees F,	100 psig

QUESTION: 053 (1.00)

The following conditions exist:

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

Which of the following was the only signal that could have generated the MSIV isolation?

a. Low reactor water level

b. High main steam line flow.

c. High main steam line radiation

d. Low main steam line pressure

QUESTION: 054 (1.00)

Inoperability of a Group 9 automatic primary containment function and entry into Technical Specifications will result if total power output is lost from:

a. 2VBB-UPS1A.

b. 2VBB-UPS1B.

c. 2VBA*UPS2A.

d. 2VBA*UPS2B.

QUESTION: 055 (1.00)

The following conditions exist:

- There is a steam leak in the drywell.
- The "B" loop RHR pump was placed in operation.
- Drywell spray valves MOV-25B and MOV-15B are stroking open.

Select the expected automatic system response if the high drywell pressure clears before the valves are full open?.

Drywell spray valves:

a. stroke full open then close.

b. reverse direction and close.

c. stop in an intermediate position.

d. stroke full open.

QUESTION: 056 (1.00)

The reactor is in Mode 5. Which of the following is required if both trains of the Standby Gas Treatment System (GTS) become inoperable?

a. Establish Primary Containment.

b. Evacuate the Refuel Floor.

c. Stop moving irradiated fuel.

d. Secure and isolate reactor building ventilation.

QUESTION: 057 (1.00)

The following conditions exist:

- The reactor is in Mode 4.
- The "A" loop of RHS is in shutdown cooling.
- The "B" loop of RHS is in suppression pool cooling.
- A valid Level 1 reactor water level condition occurs.

Which of the following describes the automatic response of the RHS system?

a. The "A" and "B" RHS pumps trip, the "B" loop shifts to the injection mode, and the "B" RHS pump restarts.

b. The "A" RHS continues in shutdown cooling and the "B" RHS pump trips.

c. The "A" RHS pump trips and the "B" loop realigns to the injection mode.

d. The "A" RHS continues in shutdown cooling and the "B" loop realigns to the injection mode.

QUESTION: 058 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- CRD pump P1A is inoperable for maintenance.
- CRD pump P1B trips and cannot be immediately restarted.
- One accumulator is inoperable for a withdrawn control rod.

A manual scram is required:

a. immediately.

b. if reactor pressure decreases to less than 900 psig.

c. if one additional accumulator trouble alarm occurs.

d. if NOT able to start one CRD pump within 20 minutes.

QUESTION: 059 (1.00)

The scram discharge volume vent and drain valves are verified closed by N2-SOP-101C, "Reactor Scram".

Which of the following is an adverse consequence if they do NOT close when a scram occurs?

a. There will be a primary leak to the reactor building.

b. The CRD discharge path has insufficient back pressure.

c. Excess control rod insertion speed will damage the drive mechanism.

d. The reactor pressure will be necessary to complete rod insertion.

QUESTION: 060 (1.00)

During rod withdrawal for a startup, the HIGHEST worth control rods are considered to be:

a. position 8-12 at high coolant temperatures.

b. position 8-12 at low coolant temperatures.

c. position 12-16 at high coolant temperatures.

d. position 12-16 at low coolant temperatures.

QUESTION: 061 (1.00)

The reactor is shutdown in Mode 4. Which of the following requires that reactor water level be raised and maintained at 227 - 243 inches on the Shutdown Range?

a. The "A" recirculation pump running with CRD "A" pump running.

b. No reactor recirculation pumps running with one shutdown cooling loop operating at greater than 180 Deg F. coolant temperature.

c. No reactor recirculation pumps running with one shutdown cooling loop at 5000 gpm and cannot be raised.

d. One recirc pump running with no shutdown cooling loops in operation.

QUESTION: 062 (1.00)

With the reactor initially at 100% power, the following conditions have occurred:

- Main condenser vacuum started decreasing due to a problem with the Off Gas system.
- Power reduction per N2-SOP-09, Loss of Vacuum, was started.
- Vacuum reached 23" Hg and a manual reactor scram was initiated.

Which of the following should NOT be immediately performed after the scram?

a. Open any turbine bypass valves.

b. Start both Off Gas vacuum pumps.

c. Place the standby SJAE in service.

d. Start one Condenser Air Removal Pump.

QUESTION: 063 (1.00)

With an initial main condenser vacuum of 28" Hg, and a loss of vacuum in progress, at what vacuum (decreasing) will the main condenser be lost as a heat sink?

a. 22.1" Hg vacuum.

b. 18.5" Hg vacuum

c. 7.0" Hg vacuum

d. 0.0" Hg vacuum

QUESTION: 064 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- Reactor Building Closed Cooling Water Pump 2CCP-P1C and P3C are out of service for maintenance on SWG014.
- 2CCP-P1A, P1B, P3A, and P3B are operating.
- An electrical transient causes the running CCP pumps to trip and lock out.

Select the IMMEDIATE operator action(s).

a. Only trip both WCS cleanup pumps.

b. Trip both WCS cleanup pumps and scram the reactor.

c. Trip the main turbine and scram the reactor.

d. Scram the reactor and trip both recirculation pumps.

QUESTION: 065 (1.00)

While at 100% power, if both reactor recirculation pump seals fail on one pump, the maximum expected increase in leak rate to the drywell will be approximately:

a. 5 gpm

b. 30 gpm

c. 50 gpm

d. 100 gpm

QUESTION: 066 (1.00)

The following conditions exist:

- An ATWS is in progress.
- RPV Level was lowered in accordance with N2-EOP-C5, "Level/Power Control".
- RPV level is being maintained between -38 inches and -10 inches.
- The SLS system automatically initiated and SLS tank level is now 0.0 gallons.

Which of the following describes why N2-EOP-C5 prohibits raising RPV level to approximately 200 inches?

Raising RPV level will:

a. cause boron carryover to the steam system.

b. remove boron from the core area.

c. displace hot water with cold water.

d. cause power oscillations.

QUESTION: 067 (1.00)

The following conditions exist:

- The reactor is at 100% power.
- The SSS has decided to enter N2-SOP-78, "Control Room Evacuation" due to nausea from an unknown airborne contaminant.
- All immediate actions of SOP-78 could NOT be completed.

Which of the following permits the main turbine to be immediately tripped at the front standard?

a. The reactor remains critical after control room evacuation.

b. The mode switch remains in the RUN or STARTUP position after evacuation.

c. Upon arrival at the front standard.

d. The reactor is locally scramed.

QUESTION: 068 (1.00)

The following conditions exist:

- There has been a major fire in the Control Room.
- N2-SOP-78 "Control Room Evacuation", has been entered.
- All immediate and subsequent actions have been performed.

Which of the following describes an effect of transferring to the Appendix "R" mode of operation?

a. The RCIC turbine steam supply valve, 2ICS*MOV120, cannot be opened if it automatically closes on RPV high level.

b. Diesel output breakers and feeder breakers for 2EJS*US1/3 must be closed using the local "test" switch.

c. Operation of ALL SRV's is disabled except for the safety mode.

d. The diesel room exhaust fan must be locally started if the associated diesel is started.

QUESTION: 069 (1.00)

For which of the following would continued execution of N2-EOP-RPV, "RPV Control", be performed instead of entering N2-EOP-C5, "LEVEL/POWER CONTROL"?

a. all control rods are inserted to position 02 except one at position 04.

b. all control rods are inserted to position 00 except one at position 48.

c. all APRMs are downscale and the reactor period is negative.

d. The on shift STA states that the reactor will remain shutdown under all conditions.

QUESTION: 070 (1.00)

EOP-C6 "Primary Containment Flooding" has been entered and the containment water level is being maintained as required. Select the reason why EL 298.25 ft is the Maximum Containment Water Level Limit.

a. This level is equivalent to an RPV water level at the TAF.

b. Above this level water will cover the SRV tailpipe vents.

c. Pump head from injection sources is NOT sufficient to provide adequate flow for long term cooling.

d. Primary containment integrity will NOT be assured.

QUESTION: 071 (1.00)

N2-EOP-MSL "MSIV Leakage Control" has been entered. Select the condition that permits exit from N2-EOP-MSL "MSIV Leakage Control".

a. Control Building HVAC is operating in the pressurization mode.

b. Turbine building HVAC is operating in the normal mode.

c. Chemistry has determined that no fuel failure exists.

d. The MSIVs are being opened on order to emergency depressurize.

QUESTION: 072 (1.00)

The following conditions exist:

- There is a coolant leak into containment.
- The reactor has been successfully scrammed.
- Plant parameters are approaching limits that require emergency depressurization.
- Emergency depressurization is anticipated and main turbine bypass valves have been opened in accordance with N2-EOP-RPV, section RP.
- The Suppression Pool Level is normal.

Conditions degrade and immediate "Emergency RPV Depressurization" per N2-EOP-C2 is directed. Select the REQUIRED operator action.

a. Close the bypass valves and open 7 SRVs valves.

b. Open 7 SRVs and leave the bypass valves open.

c. Continue depressurization using only bypass valves.

d. Depressurize using bypass valves and 5 SRVs.

QUESTION: 073 (1.00)

The following conditions exist:

- Emergency RPV Depressurization per N2-EOP-C2 is required.
- SRVs are NOT available.
- MSIV Isolation interlocks have been defeated per EOP-6, att 18, "Depressurizing to the Condenser".

Which of the following MSIV isolations remain active?

a. RPV low level.

b. Main steam line high radiation.

c. Main steam line low pressure.

d. Manual MSIV isolation.

QUESTION: 074 (1.00)

With Suppression Pool Temperature initially 80 Deg F, the following conditions now exist:

- One SRV spuriously opened at 1105 AM.
- The keylock switch for the associated SRV was placed in OFF.
- The valve position indication for the SRV was RED and is now GREEN.
- There is a steam flow/feed flow mismatch and generator output is decreased.
- SRV tailpipe temperature is steady at 348 Deg F.
- Average Suppression Pool temperature is rising approximately 2.0 Deg F/minute.

Select the required action.

a. Enter N2-SOP-34 "Stuck Open SRV" and Scram at 1110 AM if conditions remain the same.

b. Enter EOP-PC "Primary Containment Control" Scram when suppression pool temperature exceeds 110 Deg F.

c. Place suppression pool cooling in service and wait to determine actual SRV position.

d. Exit N2-SOP-34 "Stuck Open SRV" and restore suppression pool temperature to less than 90 Deg F per EOP-PC.

QUESTION: 075 (1.00)

The following conditions exist:

- The reactor feedwater level control system has malfunctioned.
- Reactor water level is 210 inches and rising rapidly.
- All automatic actions occurred except that ONE feed pump failed to trip either automatically or manually.
- Level is continuing to rise rapidly.

As the RPV level is rising, select the RPV level at which the MSIVs must be closed in order to prevent water from entering the main steam lines.

a. 220 inches

b. 227 inches

c. 250 inches

d. 275 inches

QUESTION: 076 (1.00)

The following conditions exist:

- The reactor was at 100% power.
- A malfunction caused bypass valves to open.
- Reactor pressure is decreasing rapidly.
- The mode switch is placed in SHUTDOWN at approximately 900 psig.
- SOP-101C, "Reactor Scram" is entered and ALL immediate actions are complete.
- Reactor pressure continues to decrease.

Which of the following is required?

a. Close the outboard MSIVs before reaching 500 psig.

b. Trip the main turbine before reaching 363.3 MWe.

c. Verify that the Backup Pressure regulator is in service.

d. Enter N2-EOP-PC, "Primary Containment Control".

QUESTION: 077 (1.00)

A Safety Relief Valve (SRV) tailpipe vacuum breaker has failed in the open position during SRV operation.

Which of the following will result?

a. Direct pressurization of the drywell each time the SRV is opened.

b. Steam bypassing the T-quenchers with a direct discharge path into the suppression pool water.

c. Suppression pool water being drawn up into the SRV tailpipe line after the SRV is closed.

d. Incorrect relief mode setpoints for this SRV due to reduced back pressure.

QUESTION: 078 (1.00)

Which of following conditions will ALWAYS require entry into N2-EOP-SC "Secondary Containment Control"?

a. Standby Gas Treatment system automatically started.

b. High Pressure Core Spray area temperature high.

c. Turbine building HVAC automatic shutdown.

d. RCIC Pump Room sump overflowing.

QUESTION: 079 (1.00)

The following conditions exist:

- Reactor power is 99% at 101% rod line.
- A sudden reduction in core flow is experienced.
- One recirculation pump is running with core flow at 48 mlb/hr.

Which of the following is required?

a. Continuously monitor for unstable neutron flux and immediately insert CRAM rods or raise core flow.

b. Continuously monitor for unstable neutron flux and scram if flux oscillations exist.

c. Immediately place the mode switch in SHUTDOWN.

d. Reduce recirculation flow to minimum and place the mode switch in SHUTDOWN.

QUESTION: 080 (1.00)

The following conditions exist two days after shutdown from 100% power operation:

- The reactor is in Mode 4 to replace a recirculation pump seal.
- The plant has experienced a Station Blackout.
- The HPCS diesel did NOT start.
- Reactor vessel level is stable at 180 inches.
- Reactor water temperature is 160 Deg F. and increasing.

Which of the following must be performed before or concurrent with any other actions?

a. Attempt to establish a steam flow path to the main condenser.

b. Establish primary AND secondary containment before exceeding 200 deg F.

c. Open the reactor head vents before exceeding 212 deg F.

d. Enter N2-EOP-RPV, "RPV Control".

QUESTION: 081 (1.00)

The following conditions exist:

- The reactor was initially at 95% power and 100% rod line.
- Feedwater (FW) temperature has decreased 10 deg F in the last 10 minutes and is trending downward.
- Reactor power is trending upward.
- No reason for the feedwater temperature decrease is known.

Which of the following is required.

a. Reduce reactor power to less than 3120 Mwt.

b. Verify both recirculation controllers in manual and stabilize reactor power.

c. Reduce power to less than 80% using ONLY recirculation flow.

d. Scram if in the BAD region of FW temp/thermal power limits of N2-SOP-08 Fig #1.

QUESTION: 082 (1.00)

Which of the following constitutes "Adequate Core Cooling"?

NOTE: Only the injection sources stated are injecting.
Reactor pressure is 500 psig.
Levels given are actual.

a. ATWS in progress, the feed system is maintaining level between -50 inches and -14 inches, MSIVs are open.

b. All rods in, 7 ADS valves are open, RPV level is -50 inches and decreasing, MSIVs are closed.

c. All rods in, RCIC is injecting, 1 SRV is open, RPV level is -60 inches, MSIVs are closed.

d. ATWS in progress, CRD, RCIC and SLS (with Boron) are injecting, RPV level is -50 inches, MSIVs are open.

QUESTION: 083 (1.00)

The following conditions exist:

- A small break LOCA is in progress.
- Appropriate EOPs have been entered.
- No injection sources are available.
- RPV level is approaching the TAF.

Which of the following describes why opening of the SRVs is delayed until water level has decreased to the Minimum Zero-Injection RPV Level?

a. Opening SRVs before this level reduces the time the core remains adequately cooled with no injection.

b. Steam Cooling is NOT effective in removing decay heat when RPV level is at or above TAF.

c. More time is needed to establish an injection source before emergency depressurizing.

d. Opening SRVs before this level produces insufficient steam mass removal rate for adequate core cooling.

QUESTION: 084 (1.00)

With refueling operations in progress, the following occurs:

- A fuel bundle is dropped during withdrawal from the core.
- The bundle is resting about 30 degrees off vertical in the reactor vessel.
- NO radiation alarms have been received.

Select the IMMEDIATE action.

a. Stop all refueling operations AND immediately evacuate ALL persons from the Refuel Floor.

b. Stop all refueling operations AND await instructions from the refuel floor SRO/LSRO or SSS.

c. Evacuate unnecessary personnel from the Refuel Floor AND Drywell.

d. Isolate the reactor building ventilation AND start the Standby Gas Treatment System.

QUESTION: 085 (1.00)

While conducting refueling operations as the Refuel Floor SRO, the following conditions exist:

- A fuel bundle is being moved from the core to the spent fuel pool.
- All refuel floor radiation monitors suddenly alarm.
- The reactor building isolates and the Standby Gas Treatment System automatically starts.
- The bundle must be placed in a safe condition so that the crane operator can evacuate the refuel floor.

Which of the following is required?

The bundle should be:

a. lowered at its present location and the weight removed from the crane.

b. placed in the location from which it was removed.

c. placed in the nearest fuel pool OR reactor vessel storage location.

d. moved to the fuel pool internals storage pit and lowered to the bottom but the weight of the bundle shall NOT be removed from the crane.

QUESTION: 086 (1.00)

During an ATWS, which of the following alternate methods for control rod insertion will provide the maximum differential pressure over the full travel of the control rod?

(Note: Assume the scram is reset or can be reset.)

a. Vent the scram air header.

b. Using the individual control rod Scram Test Switches.

c. Using the Reactor Manual Control System to drive rods.

d. De-energize the scram solenoids using the power select switch.

QUESTION: 023 (1.00)

During a reactor startup, the RWM becomes INOP. In accordance with Technical Specifications, the RWM is bypassed and outward rod motion continued using personnel rod position verification.

Independent rod position verification must be continued until:

a. turbine first stage pressure is above the LPSP.

b. thermal power is greater than 20%.

c. total steam flow is above the LPSP.

d. the LPSP light illuminates.

QUESTION: 024 (1.00)

During power reduction, which rod block feature remains enabled (NOT bypassed) when the mode switch is placed in STARTUP?

a. APRM Downscale

b. APRM INOP.

c. RBM Downscale.

d. RBM INOP.

QUESTION: 025 (1.00)

Which of the following RPS trip signals is NEVER bypassed?

a. APRM Inop.

b. APRM Upscale (118%)

c. Reactor Water Level Low.

d. Mode Switch in SHUTDOWN.

QUESTION: 087 (1.00)

The following conditions exist in the order given:

- The reactor was operating at 70% power between the 70% and the 100% rod lines.
- Annunciator 602119, "RECIRC PUMP 1A/1B MOTOR AUTO TRIP" alarms.
- Recirculation pump 1B has tripped and pump speed is 50 rpm.
- Core flow is 55% and stable.
- Reactor power is now 52%.

Select the required action.

a. Place the Mode Switch is SHUTDOWN.

b. Close pump discharge valve, 2RCS*MOV18B.

c. Raise core flow to exit the restricted zone.

d. Reduce the Maximum Average Planer Linear Heat Generation Rate, (MAPLHGR) within 15 minutes.

QUESTION: 088 (1.00)

With the reactor at 100% power, which of the following will result in a reactor scram AND a DIRECT automatic transfer of the recirculation pumps from 60 Hz to 15 Hz?

a. Main turbine trip.

b. Reactor Feedwater Pump trip.

c. Drywell pressure high - 1.68 psig.

d. Reactor water level high - Level 8.

QUESTION: 089 (1.00)

Manual control of the Feedwater Level Control System is immediately required if power is lost from:

a. 2BYS-SWG001A

b. 2BYS-SWG001B

c. 2BYS*SWG002A

d. 2BYS*SWG002B

QUESTION: 090 (1.00)

A plant event has required entry into N2-EOP-C5 "Level/Power Control" and N2-EOP-PC "Primary Containment Control". Suppression pool level is decreasing.

Given this situation, ECCS pump operation is allowed below the vortex level limit for any system:

a. if no other indications of cavitation exist.

b. only if reactor water level is below -38 inches.

c. anytime reactor water level is below -14 inches.

d. irrespective of suppression pool water level.

QUESTION: 091 (1.00)

The following conditions exist:

- The reactor is in Mode 4.
- One loop of RHR shutdown cooling is in operation at rated flow.
- The opposite loop Reactor Recirculation Pump, (RCS-P1A/B) is operating at minimum flow.

IDENTIFY the limitation for operating RCS-P1A/B if all Reactor Building Closed Cooling Loop (CPP) flow to the pump is lost.

The recirculation pump:

a. can be run until continuous motor temperature exceeds 248 Degrees F. provided that CRD seal injection is maintained.

b. can be run indefinitely provided that CRD seal injection is maintained to the seal.

c. must be tripped if any motor or bearing temperature alarm occurs.

d. must be tripped without delay.

QUESTION: 092 (1.00)

The following conditions exist:

- N2-EOP-PC "Primary Containment Control" section PCP was entered due to high drywell pressure.
- Drywell sprays were initiated to reduce drywell pressure.
- Drywell pressure decreased to 1.0 psig and sprays were stopped.
- Drywell pressure is now 2.0 psig and increasing.

Which of the following describes the required action?

a. Reinitiate intermittent drywell sprays as necessary to remain below 1.68 psig.

b. Reinitiate continuous drywell sprays to remain below 1.68 psig.

c. Reinitiate intermittent drywell sprays as necessary to remain within the Drywell Spray Initiation Limit, fig PC-2.

d. Reenter N2-EOP-PC "Primary Containment Control" at the beginning.

QUESTION: 093 (1.00)

The following conditions exist:

- A station blackout has occurred.
- Both Div I and Div II Emergency Diesels (EDG) failed to start.
- The Div III EDG started and was immediately shutdown.
- Subsequently, 2ENS*SWG101 is now being supplied from the DIV III EDG per N2-SOP-03 "Loss of All AC Power".

Which of the following is PROHIBITED in this electrical lineup?

a. Starting an RHR pump.

b. Starting a second Div I Service Water Pump.

c. Starting the HPCS pump.

d. Starting a CRD pump.

QUESTION: 094 (1.00)

The non-emergency automatic safety trips for the Emergency Diesel Generators (EDG) will be bypassed for Div I and II but will remain active for Div III if the EDG automatic starts are caused by:

a. loss of bus voltage on the respective electrical bus.

b. high drywell pressure or low RPV level.

c. only high drywell pressure.

d. only low RPV level.

QUESTION: 095 (1.00)

The following conditions exist:

- The reactor is at 100% power
- Various reactor building area radiation monitors are alarming.
- A leak of unknown origin, in the reactor building, has been reported to the control room.

Which of the following systems may be isolated?

a. High Pressure Core Spray

b. Control Rod Drive

c. Reactor Water Cleanup

d. Low Pressure Core Spray

QUESTION: 096 (1.00)

Should it become necessary to lower reactor level during an ATWS condition (N2-EOP-C5 "Level/Power Control"), the following systems are specified for use to maintain level:

Condensate/feedwater
CRD
RCIC with suction from the condensate storage tank

Only these systems are to be used because:

a. these systems provide the cleanest source of water for injection into the reactor.

b. their point of injection ensures mixing of the cold injection water prior to core entry.

c. these systems can operate automatically so the operator need only verify lineups when this step is reached.

d. they can be throttled to prevent power oscillations.

QUESTION: 097 (1.00)

With the reactor initially at 100% power, a rapid loss of instrument air pressure, as indicated on 2CEC*PNL851, will require an immediate reactor scram if:

a. pressure reaches 80 psig.

b. any MSIV loses full open indication.

c. any control rod has scrammed.

d. more than one control rod drifts.

QUESTION: 098 (1.00)

The following conditions exist:

- There has been a major fire in the Control Room.
- N2-SOP-78 "Control Room Evacuation", has been entered.
- The reactor was NOT shutdown prior to leaving the control room.

WHICH of the following has the responsibility to scram the reactor outside of the control room?

a. Control Room "E"

b. Inplant Operator

c. SSS/ASSS

d. CSO

QUESTION: 099 (1.00)

The following conditions exist:

- The reactor is in Operational Condition 3.
- Drywell cooling is malfunctioning.
- Drywell temperature from all monitoring locations ranges from 150 to 170 Deg F and is stable.

Which of the following may be used to reduce drywell temperature?

a. Only drywell coolers.

b. Drywell coolers and drywell venting.

c. Drywell coolers and drywell air purge.

d. Drywell sprays and drywell air purge.

QUESTION: 100 (1.00)

During power ascension the following plant conditions are noted to occur over a 2 minute period.

- Reactor pressure decreased to 750 psig, now stable at 750 psig.
- Reactor Water Level is +180 inches trending to normal.
- Reactor power decreased 5%, now stable at 50%
- Generator output decreased approximately 50 Mwe.
- No automatic actuations have occurred.

Which of the following is required?

a. Increase power with recirculation flow.

b. Initiate Rapid Power Reduction, N2-SOP-101D.

c. Manually control EHC to raise reactor pressure.

d. Scram the reactor and close the MSIVs.

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

ANSWER: 001 (1.00)

c.

REFERENCE:

GAP-RPP-01, Rev 03, pgs 4-5, 3.4.2.b.

[3.3/3.8]
294001K103 ..(KA's)

ANSWER: 002 (1.00)

a.

REFERENCE:

S-RAP-RPP-0103, Rev 05, pg 8, 4.10.

[3.3/3.8]
294001K103 ..(KA's)

ANSWER: 003 (1.00)

a.

REFERENCE:

GAP-RPP-08, rev 03, pg. 3, 3.5
S-RAP-RPP-0801, rev 05, pgs. 1-2, 3.2.1.b.
03-OPS-006-343-3-01, rev 1; W. EO 4.0, pg. 37.

[3.3/3.8]
294001K103 ..(KA's)

ANSWER: 004 (1.00)

c.

REFERENCE:

GAP-OPS-02, rev 05; pg. 1, 2.1.2; pgs 12-13, 3.10.1
03-OPS-006-343-3-01, rev 1; Q. EO 2.0, pg 30; 2.0, pg 45.

[3.9/4.5]
294001K102 ..(KA's)

ANSWER: 005 (1.00)

a.

REFERENCE:

GAP-OPS-02, rev 06; pg 8, Note rev 6 made it a requirement for both the CSO AND the SSS to concur.
Facility replacement Question - TRAIN Q8861

[3.9/4.5]

294001K102 . ..(KA's)

ANSWER: 006 (1.00)

b.

REFERENCE:

NIP-FFD-01, rev 03, pg 2, 2.4.3 & pg 12, 3.5.1-3.5.2.
10CFR26.20, "...require a statement to be made by a called-in-person as to whether alcohol has been consumed etc."

[3.2/3.7]
294001K105 ..(KA's)

ANSWER: 007 (1.00)

d.

REFERENCE:

EPIP-EPP-28,rev 02, pgs 4, 3.3.8.e.
O3OPS-006-350-3-01, rev 0; EO-3.0, pg 27.

[3.5/3.8]
294001K116 ..(KA's)

ANSWER: 008 (1.00)

d.

REFERENCE:

NIP-PRO-01, rev 03, pg 3, 3.2.3.
O3-OPS-006-343-3-01, rev 1, EO-5.0, pg 14.

[2.9/3.4]
294001A101 ..(KA's)

ANSWER: 009 (1.00)

a.

REFERENCE:

NIP-PRO-04, rev 04, pgs 1-2, 3.1.
O3-OPS-006-343-3-01, rev 1, EO-2.0, pg 13.

[2.7/3.7]
294001A103 ..(KA's)

ANSWER: 010 (1.00)

c.

REFERENCE:

NMP2 EOP BASIS DOCUMENT, rev 2, pg 13, Section C, 3rd pp.
O2-REQ-006-344-2-20, rev 0; EO-1.0 ff., page 3.

[4.2/4.2]
294001A102 ..(KA's)

ANSWER: 011 (1.00)

b.

REFERENCE:

Technical Specification, pg 2-1, SAFETY LIMIT 2.1.2 ACTION.

[2.7/3.7]
294001A103 ..(KA's)

ANSWER: 012 (1.00)

a.

REFERENCE:

GAP-OPS-01, rev 06, pgs 6-7, 3.1.4.1 & 3.1.6.g&i;pgs 8-9, 3.1.7
N2-ODP-OPS-0106 rev 10, pg 37, 3.13.4.
N2-ODI-5.30 rev 05, pg 7, 4.2.5.1 -

[3.3/4.2]
294001A109 ..(KA's)

ANSWER: 013 (1.00)

d.

REFERENCE:

N2-ODP-TQS-0101 rev 01, pg 5, 4.5.2.
GAP-OPS-01 rev 06, pg 15, 3.2.

[2.7/3.7]
294001A103 ..(KA's)

ANSWER: 014 (1.00)

a.

REFERENCE:

Technical Specifications, pg 3/4 pg 3-1, sect 3.3.1 table 3.3.1-1,
TS pg 0-1, sect 3.0.3
N2-SOP-97 rev 00, pgs 4-5 4.2.1 "CAUTION".
N2-ODI-5.30 rev 05, pg 8, 4.3.3

[4.5/4.3]
294001A113 ..(KA's)

ANSWER: 015 (1.00)

a.

REFERENCE:

N2-OP-101D rev 03, pg 3, Precaution & Limitation 10.1.

[3.2/3.4]
294001A115 ..(KA's)

ANSWER: 016 (1.00)

c.

REFERENCE:

N2-ODI-5.30 rev 05, pg 2, 4.1.1.
N2-EPP-18, rev 2, pg 5, sections 14c and 15

[2.9/4.7]
294001A116 ..(KA's)

ANSWER: 017 (1.00)

b.

REFERENCE:

10 CFR 50.72.a.ii.(3)
EPIP-EPP-20 rev 03, pg 1, 3.1 NOTES; pg 10, ATTACHMENT 2, 4.a,b & f.
O3OPS-006-350-3-01 rev 0, pg 18, EO-3.0.; pg 21, EO-3.0.

[2.9/4.7]
294001A116 ..(KA's)

ANSWER: 018 (1.00)

b.

REFERENCE:

NFL pg 16 & 17, and fig 13
EO-3.0

[3.0/3.7]

234000K505 ..(KA's)

ANSWER: 019 (1.00)

a.

REFERENCE:

RPS, pg 69, table 1
EO-3.0

[4.0/4.1]

212000A216 ..(KA's)

ANSWER: 020 (1.00)

c.

REFERENCE:

RPS, pg 23 & 24, sect III.A.1, and fig #5
EO-8.0

[3.8/4.1]

262001K306 ..(KA's)

ANSWER: 021 (1.00)

b.

REFERENCE:

NJS/NNS, pg 43, sect 2.a EO-9.0
N2-ODP-OPS-106, rev 10, pg 25, 3.9.4.h,

[3.1/3.4]

262001K601 ..(KA's)

ANSWER: 022 (1.00)

d.

REFERENCE:

TMS pgs 10 and 14 and 24, ESS preheat feedwater, less ESS gives lower feedwater temp.
EO-5.0
N2-SOP-34, sect 4.5

[3.7/3.8]

239002A106 ..(KA's)

ANSWER: 023 (1.00)

b.

REFERENCE:

TS 3.1.4.1, pg 3/4 1-16
N2-OP-95A, pg 10, D.4.0,
RWM, EO-7.0.d and EO-16.0

[3.1/3.2]

201006G010 ..(KA's)

ANSWER: 024 (1.00)

b.

REFERENCE:

RMC, pg 91-93, table #1 EO-14.c

[3.7/3.6]

215005A308 ..(KA's)

ANSWER: 025 (1.00)

c.

REFERENCE:

RPS, pg 69, table 1
EO-4.0c,5.0

[3.7/3.9]

212000K102 ..(KA's)

ANSWER: 026 (1.00)

d.

REFERENCE:

RCS, pg 37, middle of page EO-6.0
N2-OP-29, rev 6, pg 7, sect 8.g

[3.1/3.2]

202002K108 ..(KA's)

ANSWER: 027 (1.00)

c.

REFERENCE:

RCS, pg 40, middle of page EO-4.c
RRS, pg 12, sect C
N2-OP-29, rev 6, pg 7, sect D.6.g

[3.4/3.4]

202001K105 ..(KA's)

ANSWER: 028 (1.00)

a.

REFERENCE:

RMC pg 20, middle of page, restricted to notch drive only and no rod block occurs unless pos 44 is also bad.
EO-3.0 and 13.0
Concerning TS 3.1.4.2.a, the RSCS is not inoperable by one reed switch.

[3.1/3.3]

201004A201 ..(KA's)

ANSWER: 029 (1.00)

a.

REFERENCE:

CSH, pg 10, sect E EO-2.0 and 3.4.a,b,c

[3.6/3.6]

209002A402 ..(KA's)

ANSWER: 030 (1.00)

d.

REFERENCE:

RCIC, pg 99, table 3, A.1.e EO-2.0 and 3.0

[3.8/3.7]

217000A201 ..(KA's)

ANSWER: 031 (1.00)

a.

REFERENCE:

N2-OP-35, rev 4, pg 8, D.7 and pg 28, H.2.0, for ans a
RCIC, pg 10, sect L, for ans b,c,d, pg 31 for ans d.
RCIC obj, EO-6.0

[3.9/3.9]

217000A402 ..(KA's)

ANSWER: 032 (1.00)

c.

REFERENCE:

CSH, pg 15, item 13, EO-4.c
N2-OP-33, rev 5, pg 23, sect H.11

[3.4/3.5]

209002K402 ..(KA's)

ANSWER: 033 (1.00)

c.

REFERENCE:

ADS, pg 8 and 9, sect C, and pg 13, FIG #5, EO-2.0, 3.0, 4.a,b,c

[3.8/4.0]

218000K403 ..(KA's)

ANSWER: 034 (1.00)

d.

REFERENCE:

RSS, pg 14, sect 6, EO-4.b

[3.8/3.8]

218000K501 ..(KA's)

ANSWER: 035 (1.00)

b.

REFERENCE:

ARC, pg 27, item V.A.2, EO-6.0 all

[3.1/3.2]

271000G010 ..(KA's)

ANSWER: 036 (1.00)

b.

REFERENCE:

NMS, pg 41, 42, 43, sections 6 & 7, EO-3.0

[3.2/3.3]

215005A403 ..(KA's)

ANSWER: 037 (1.00)

d.

REFERENCE:

NMS, pg 52, 53, sect 4, and pg 115, table 3, EO-4.c

[3.6/3.7]

215004K101 ..(KA's)

ANSWER: 038 (1.00)

d.

REFERENCE:

N2-OP-73B, rev 4, pg 4, item d.7, and pg 16 & 19
BYS/BWS EO-6.e

[3.1/3.4]

263000K201 ..(KA's)

ANSWER: 039 (1.00)

b.

REFERENCE:

N2-Op-30, rev 9, pg 9, item 3.0.m
RPS, pg 26, d and e eo-5.0

[3.9/4.0]

212000A214 ..(KA's)

ANSWER: 040 (1.00)

c.

REFERENCE:

N2-OP-74B, rev 4, pg 4, item d.7, and pg 16 & 19 EO-8.0

[3.4/3.8]

263000K301 ..(KA's)

ANSWER: 041 (1.00)

d.

REFERENCE:

SLS, pg 22, 23, 4.a.1.e obj EO-7.d

[3.6/3.7]

211000A101 ..(KA's)

ANSWER: 042 (1.00)

b.

REFERENCE:

RRS, pg 42, table #1 and fig #2 Obj EO-5.0

[3.6/3.7]

202001K506 ..(KA's)

ANSWER: 043 (1.00)

c.

REFERENCE:

FHE, pg 40, sect 6, last para, EO-3.0, 4.0, 5.0

[3.1/3.7]

234000A302 ..(KA's)

ANSWER: 044 (1.00)

d.

REFERENCE:

TS pg 3/4 1-12, sect 4.1.3.6
RDM, EO-6.0, 8.0

[3.9/3.9]

201002G010 ..(KA's)

ANSWER: 045 (1.00)

c.

REFERENCE:

RDM, pg 32, sect C, middle of page EO-4.0

[3.6/3.7]

201003K404 ..(KA's)

ANSWER: 046 (1.00)

a.

REFERENCE:

HVC, pg 39, sect 4.a EO-7.d

[3.7/4.1]

272000K402 ..(KA's)

ANSWER: 047 (1.00)

b.

REFERENCE:

RCS, pg 23, 3.d and e, pg P68a item #16 EO-8.0

[3.1/3.1]

290002K307 ..(KA's)

ANSWER: 048 (1.00)

d.

REFERENCE:

HVT pg 21, EO-8.0
94 smod

[3.3/3.4]

288000G007 ..(KA's)

ANSWER: 049 (1.00)

a.

REFERENCE:

RDS pg 13, 2nd para EO-4.a

[3.8/3.9]

201001A204 ..(KA's)

ANSWER: 050 (1.00)

b.

REFERENCE:

RMC, pg 13, item 6.f EO-2.g

[3.2/3.1]

214000A302 ..(KA's)

ANSWER: 051 (1.00)

d.

REFERENCE:

RDM, pg 20, bottom half of page.
EO-3.0

[3.3/4.2]

290002G011 ..(KA's)

ANSWER: 052 (1.00)

d.

REFERENCE:

Steam tables
N2-EOP-RPV EO-7.0

[3.6/3.8]

216000K507 ..(KA's)

ANSWER: 053 (1.00)

b.

REFERENCE:

ISC, pg 12, sect F, GP 1 EO-2.0

[3.5/3.5]

223002A302 ..(KA's)

ANSWER: 054 (1.00)

a.

REFERENCE:

N2-OP-83, rev 2, pg 7, item D.3.0
N2-OP-71D, rev 1, pg 6, item D.2.0
ARM 852503 does not identify this condition, this is the only UPS that has this effect.
obj VBB EO-8.0 and ISC EO-8.0

[3.2/3.3]

223002K607 ..(KA's)

ANSWER: 055 (1.00)

c.

REFERENCE:

RHS, pg 18, EO-4.c, does not address reset of hi DW press signal for valve logic

[3.6/3.8]

226001A101 ..(KA's)

ANSWER: 056 (1.00)

c.

REFERENCE:

TS 3.6.5.3, pg 6-43
TS 3.6.5.1, pg 6-38
Obj SSC EO-3.c

[3.8/4.0]

290001K603 ..(KA's)

ANSWER: 057 (1.00)

c.

REFERENCE:

RHS , pgs 16-18 and 27-31 EO-7.0
94 smod

[4.2/4.2]

203000K401 ..(KA's)

ANSWER: 058 (1.00)

b

REFERENCE:

N2-SOP-30, rev 0, pg 5, sect 4.3.2

[3.6/3.6]

295022A102 ..(KA's)

ANSWER: 059 (1.00)

a.

REFERENCE:

RRS, fig #3, drains to the RBEDT
N2-SOP-97, pg 14, item 5.2.4

[3.7/4.2]

295034A202 ..(KA's)

ANSWER: 060 (1.00)

a.

REFERENCE:

N2-OP-101A

[3.3/3.7]

295014K102 ..(KA's)

ANSWER: 061 (1.00)

c.

REFERENCE:

N2-OP-31. rev 9, pg 11, D.5
N2-SOP-31, rev 00, pg 4, 4.1.10, 4.1.6.b

[3.3/3.4]

295021K301 ..(KA's)

ANSWER: 062 (1.00)

d.

REFERENCE:

N2-SOP-09, rev 00, pg 4, 5.2

[3.2/3.2]

295002G007 ..(KA's)

ANSWER: 063 (1.00)

c.

REFERENCE:

N2-SOP-09, rev 00, pg 3, 4.4

[3.2/3.3]

295002K204 ..(KA's)

ANSWER: 064 (1.00)

a.

REFERENCE:

N2-SOP-13, pg 1 & 2, sect 1.0 & 3.0

[3.4/3.6]

295018K202 ..(KA's)

ANSWER: 065 (1.00)

c.

REFERENCE:

RCS, pg 11, sect D

[3.5/3.8]

295010K304 ..(KA's)

ANSWER: 066 (1.00)

b.

REFERENCE:

EOP bases C5 , pg 37

[4.0/4.2]

295037K209 ..(KA's)

ANSWER: 067 (1.00)

d.

REFERENCE:

N2-SOP-78, rev 00, pg 7, 3.6.1.b

[3.7/3.8]

295016K302 ..(KA's)

ANSWER: 068 (1.00)

b.

REFERENCE:

N2-SOP-78, rev 00, pg 7, 3.6.1.b

[3.1/3.2]

295016A104 ..(KA's)

ANSWER: 069 (1.00)

b.

REFERENCE:

EOP bases RPV CONTROL, pg 52,

[3.4/3.7]

295006K102 ..(KA's)

ANSWER: 070 (1.00)

d.

REFERENCE:

EOP-C6 Primary Containment Flooding bases, sect N, pg 16

[3.7/4.0]

295031G007 ..(KA's)

ANSWER: 071 (1.00)

d.

REFERENCE:

N2-EOP-MSL bases sect H, pg 2

[3.9/4.5

295038G012 ..(KA's)

ANSWER: 072 (1.00)

b.

REFERENCE:

EOP-C2 Emergency RPV Depressurization bases, sect D, pg 28

[3.9/3.9]

295024A108 ..(KA's)

ANSWER: 073 (1.00)

d.

REFERENCE:

EOP-C2 bases Emergency RPV depressurization, sect J, pg 14
EOP-6, att 18

[4.5/4.5]

295031K212 ..(KA's)

ANSWER: 074 (1.00)

a.

REFERENCE:

"N2-SOP-34 Stuck Open SRV", rev 00, pg 3, 4.1
Note EOP-PC states "BEFORE 110", SOP 34 states "REACHES 110" these are inconsistent.

[4.4/4.6]

295026G011 ..(KA's)

ANSWER: 075 (1.00)

c.

REFERENCE:

RVI Fig 11, rev 2, MS centerline 648, inst zero 380

[3.1/3.3]

295008K211 ..(KA's)

ANSWER: 076 (1.00)

a.

REFERENCE:

N2-SOP-23, rev 00, pg 2, immed action 3.1.2

[3.8/3.6]

295005G010 ..(KA's)

ANSWER: 077 (1.00)

a.

REFERENCE:

MSS, pg 8, 2nd paragraph

[4.0/4.1]

295024K208 ..(KA's)

ANSWER: 078 (1.00)

d.

REFERENCE:

NBD, pg 12 RB floor drains
N2-EOP-SC "Secondary Containment Control" entry conditions

[3.7/3.5]

295036G011 ..(KA's)

ANSWER: 079 (1.00)

c.

REFERENCE:

N2-SOP-29, pg 2, 3.3 and SOP 101C, pg 2, 3.2, 3.3
This is immediate action, P/F map not needed

[3.8/3.7]

295001G010 ..(KA's)

ANSWER: 080 (1.00)

b.

REFERENCE:

TS 3.6.1.1, pg 6-1, and 3.6.5.1., pg 6-38, PC required >200 deg F,
TS, pg 1-11, mode change from 4 to 3
N2-SOP-31, pg 5, 4.2.2

[3.2/3.9]

295021G008 ..(KA's)

ANSWER: 081 (1.00)

a.

REFERENCE:

N2-SOP-08. pg 2, 3.4 immediate action

[4.0/3.9]

295014G010 ..(KA's)

ANSWER: 082 (1.00)

b.

REFERENCE:

EOP usage sect C, page 9 and 10
EOP, C5 and C1

[4.6/4.7]

295031K101 ..(KA's)

ANSWER: 083 (1.00)

a.

REFERENCE:

EOP-C3 bases, sect K, pg 5

[4.0/4.3]

295031K304 ..(KA's)

ANSWER: 084 (1.00)

c.

REFERENCE:

N2-OP-39, rev 00, pg 4, action 3.4

[3.8/3.9]

295023G010 ..(KA's)

ANSWER: 085 (1.00)

c.

REFERENCE:

N2-OP-39, rev 00, pg 4, action 3.3 and pg 16, item 5.3

[3.3/3.6]

295023A103 ..(KA's)

ANSWER: 086 (1.00)

b.

REFERENCE:

EOP-RPV bases RPV control, sect D, pg 64

[4.2/4.3]

295037K307 ..(KA's)

ANSWER: 087 (1.00)

b.

REFERENCE:

Facility replacement question - TRAIN Q3462

[4.0/3.9]

295014G010 ..(KA's)

ANSWER: 088 (1.00)

a.

REFERENCE:

RPS, pg 36, and pg 37

[3.4/3.5]

295005K302 ..(KA's)

ANSWER: 089 (1.00)

b.

REFERENCE:

N2-SOP-04, rev 00, pg 4, immed action 3.3

[3.2/3.4]

295004G010 ..(KA's)

ANSWER: 090 (1.00)

b.

REFERENCE:

EOP bases C5, sect M, pg 35,

[3.6/3.8]

295030A101 ..(KA's)

ANSWER: 091 (1.00)

a.

REFERENCE:

N2-OP-29, rev, 6, pg 32, sect 3.2 and 4.0

[3.1/3.1]

295018K303 ..(KA's)

ANSWER: 092 (1.00)

d.

REFERENCE:

EOP bases, sect C, pg 8, item entry and reentry

[3.8/4.4]

295010G012 ..(KA's)

ANSWER: 093 (1.00)

c.

REFERENCE:

SPB bases, pg 32, sect 2
N2-SOP-03, rev 3, pg 51, item 5.5.7.8

[3.8/4.0]

295003K106 ..(KA's)

ANSWER: 094 (1.00)

a.

REFERENCE:

CSH pg, pg 77, table 5 and EGS, pg 37

[4.2/4.3]

295003A102 ..(KA's)

ANSWER: 095 (1.00)

c.

REFERENCE:

N2-EOP-SC bases, section F, pg 11

[3.8/4.4]

295033G012 ..(KA's)

ANSWER: 096 (1.00)

b.

REFERENCE:

EOP-C5 bases, sect M, pg 24

[4.0/4.2]

295037K106 ..(KA's)

ANSWER: 097 (1.00)

d.

REFERENCE:

N2-SOP-08, rev 00, pg 2, sects 3.1,3.2
N2-SOP-19, rev 00, pg 3, sect, 3.2

[3.7/3.4]

295019G010 ..(KA's)

ANSWER: 098 (1.00)

a.

REFERENCE:

N2-SOP-78, rev 00, pg 5, item 3.4.5
94 smod

[3.8/3.9]

295016A101 ..(KA's)

ANSWER: 099 (1.00)

a.

REFERENCE:

N2-OP-61A, rev 4, pg 24, Caution
TS Bases 3.6.1.6
94 smod 25041

[3.4/3.8]

295028G007 ..(KA's)

ANSWER: 100 (1.00)

d.

REFERENCE:

ISC pg 12, MSIV isol on low press, 785 psig
N2-SOP-23, rev 00
EOP-6, pg 3, 4.0, Def of Verify, confirm and take

[3.8/4.1]

295037K210 ..(KA's)

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

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
001	1.00	9000002
002	1.00	9000003
003	1.00	9000004
004	1.00	9000005
005	1.00	9000006
006	1.00	9000007
007	1.00	9000010
008	1.00	9000011
009	1.00	9000012
010	1.00	9000013
011	1.00	9000014
012	1.00	9000015
013	1.00	9000016
014	1.00	9000017
015	1.00	9000018
016	1.00	9000021
017	1.00	9000022
018	1.00	9000023
019	1.00	23972
020	1.00	9000025
021	1.00	9000027
022	1.00	9000028
023	1.00	9000030
024	1.00	9000032
025	1.00	9000034
026	1.00	9000035
027	1.00	9000036
028	1.00	9000037
029	1.00	9000038
030	1.00	9000040
031	1.00	9000041
032	1.00	9000043
033	1.00	9000045
034	1.00	9000046
035	1.00	9000048
036	1.00	9000049
037	1.00	9000051
038	1.00	9000052
039	1.00	9000053
040	1.00	9000054
041	1.00	9000056
042	1.00	9000057
043	1.00	29303
044	1.00	9000062
045	1.00	9000063
046	1.00	9000064
047	1.00	9000065
048	1.00	9000066
049	1.00	9000067

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	23950
051	1.00	9000070
052	1.00	9000071
053	1.00	9000073
054	1.00	9000074
055	1.00	9000075
056	1.00	9000076
057	1.00	9000078
058	1.00	9000080
059	1.00	9000081
060	1.00	9000082
061	1.00	9000083
062	1.00	9000084
063	1.00	9000085
064	1.00	9000086
065	1.00	9000087
066	1.00	9000088
067	1.00	9000089
068	1.00	9000090
069	1.00	9000091
070	1.00	9000092
071	1.00	9000094
072	1.00	9000095
073	1.00	9000096
074	1.00	9000097
075	1.00	9000099
076	1.00	9000100
077	1.00	9000101
078	1.00	9000102
079	1.00	9000103
080	1.00	9000104
081	1.00	9000105
082	1.00	9000106
083	1.00	9000107
084	1.00	9000108
085	1.00	9000109
086	1.00	9000110
087	1.00	9000111
088	1.00	9000112
089	1.00	9000113
090	1.00	9000114
091	1.00	9000115
092	1.00	9000116
093	1.00	9000117
094	1.00	9000118
095	1.00	9000119
096	1.00	9000120
097	1.00	9000121
098	1.00	25617

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

Organized by Question Number

QUESTION	VALUE	REFERENCE
099	1.00	9000124
100	1.00	9000125
	100.00	
	100.00	

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
008	1.00	294001A101
010	1.00	294001A102
011	1.00	294001A103
013	1.00	294001A103
009	1.00	294001A103
012	1.00	294001A109
014	1.00	294001A113
015	1.00	294001A115
016	1.00	294001A116
017	1.00	294001A116
005	1.00	294001K102
004	1.00	294001K102
003	1.00	294001K103
001	1.00	294001K103
002	1.00	294001K103
006	1.00	294001K105
007	1.00	294001K116
PWG Total	17.00	

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
026	1.00	202002K108
057	1.00	203000K401
029	1.00	209002A402
032	1.00	209002K402
041	1.00	211000A101
039	1.00	212000A214
019	1.00	212000A216
025	1.00	212000K102
037	1.00	215004K101
024	1.00	215005A308
036	1.00	215005A403
052	1.00	216000K507
030	1.00	217000A201
031	1.00	217000A402
033	1.00	218000K403
034	1.00	218000K501
053	1.00	223002A302
054	1.00	223002K607
055	1.00	226001A101
022	1.00	239002A106

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
020	1.00	262001K306
021	1.00	262001K601
056	1.00	290001K603
PS-I Total	23.00	

Group II

QUESTION	VALUE	KA
049	1.00	201001A204
044	1.00	201002G010
028	1.00	201004A201
023	1.00	201006G010
027	1.00	202001K105
042	1.00	202001K506
050	1.00	214000A302
043	1.00	234000A302
018	1.00	234000K505
038	1.00	263000K201
040	1.00	263000K301
035	1.00	271000G010
046	1.00	272000K402
PS-II Total	13.00	

Group III

QUESTION	VALUE	KA
045	1.00	201003K404
048	1.00	288000G007
051	1.00	290002G011
047	1.00	290002K307
PS-III Total	4.00	
PS Total	40.00	

EMERGENCY PLANT EVOLUTIONS

Group I

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
094	1.00	295003A102
093	1.00	295003K106
069	1.00	295006K102
092	1.00	295010G012
065	1.00	295010K304
087	1.00	295014G010
081	1.00	295014G010
060	1.00	295014K102
098	1.00	295016A101
068	1.00	295016A104
067	1.00	295016K302
085	1.00	295023A103
084	1.00	295023G010
072	1.00	295024A108
077	1.00	295024K208
074	1.00	295026G011
090	1.00	295030A101
070	1.00	295031G007
082	1.00	295031K101
073	1.00	295031K212
083	1.00	295031K304
096	1.00	295037K106
066	1.00	295037K209
100	1.00	295037K210
086	1.00	295037K307
071	1.00	295038G012
EPE-I Total	26.00	

Group II

QUESTION	VALUE	KA
079	1.00	295001G010
062	1.00	295002G007
063	1.00	295002K204
089	1.00	295004G010
076	1.00	295005G010
088	1.00	295005K302
075	1.00	295008K211
064	1.00	295018K202
091	1.00	295018K303
097	1.00	295019G010
080	1.00	295021G008
061	1.00	295021K301

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
058	1.00	295022A102
099	1.00	295028G007
095	1.00	295033G012
059	1.00	295034A202
078	1.00	295036G011
EPE-II Total	17.00	
EPE Total	43.00	
Test Total	100.00	

March 24, 2000

Mr. John H. Mueller
Chief Nuclear Officer
Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station
Operations Building, 2nd Floor
P.O. Box 63
Lycoming, NY 13093

SUBJECT: NINE MILE POINT UNIT 2 REACTOR OPERATOR AND SENIOR REACTOR OPERATOR INITIAL EXAMINATION REPORT NO. 05000410/1999301

Dear Mr. Mueller:

This report transmits the results of the subject operator licensing examinations conducted by the NRC during the period of February 11 through February 17, 2000 at your facility. These examinations addressed areas important to public health and safety and were developed and administered using the guidelines of NUREG-1021, Revision 8, "Examination Standards for Power Reactors". All candidates passed all portions of the examinations.

During the week of January 17, 2000, while NRC was onsite for exam preparation, the NRC inspectors reviewed some training issues relating to the exam that arose last year. The inspection findings and exam performance observations were discussed with Mr. L. Pisano and other members of your staff via telephone conference call on March 1, 2000.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

No reply to this letter is required, but should you have any questions regarding this examination, please contact me at 610-337-5183, or by E-mail at RJC@NRC.GOV.

Sincerely,

/RA/

Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Docket No. 05000410
License No. NPF-69

IE42

Enclosure: Initial Examination Report No. 05000410/1999301
w/Attachments 1, 2, and 3

cc w/encl; w/Attachments 1-3:
L. Pisano, Manager - Training

cc w/encl; w/o Attachments 1-3:
G. Wilson, Esquire
M. Wetterhahn, Winston and Strawn
J. Rettberg, New York State Electric and Gas Corporation
P. Eddy, Electric Division, Department of Public Service, State of New York
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
J. Vinquist, MATS, Inc.
F. Valentino, President, New York State Energy Research
and Development Authority
J. Spath, Program Director, New York State Energy Research
and Development Authority