U.S. NUCLEAR REGULATORY COMMISSION
OPERATOR LICENSING EXAMINATION REPORT

Examination Report No.:	92-32 (OL)
Facility Docket No.:	50-410
Facility License No.:	NPF-69
Licensee:	Niagara Mohawk Power Corporation 301 Plainfield Road Syracuse, New York 13212
Facility:	Nine Mile Point Unit 2
Examination Dates:	November 16 - 20, 1992
Examiner:	C. Sisco, Operations Engineer

Chief Examiner: Carl Sisco — 12/2/92
C. Sisco, Operations Engineer — Date

Approved By: Richard J. Conte — 12/2/92
Richard J. Conte, Chief — Date
BWR Section, Operations Branch, DRS

EXAMINATION SUMMARY

An initial examination was administered to one RO candidate. In addition, a written (retake) examination was administered to one RO candidate. All applicants were well prepared and passed the examinations. The facility training staff conducted a high quality preexamination review of the written examination.

Several procedural enhancements were made as a result of the preexamination review and during the administration of the examination. The document control was weak in the simulator room in that outdated material is not removed in a timely manner.

DETAILS

1.0 INTRODUCTION AND OVERVIEW

The NRC examiner administered an initial examination to one RO candidate. In addition, a written (retake) examination was administered to one RO candidate. The examinations were administered in accordance with NUREG-1021, Examiner Standards, Revision 6. The results of the examinations are summarized below:

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

2.0 PREEXAMINATION ACTIVITIES

The facility reviewed the written examination in the NRC Regional office on November 3, 1992. The review team included the General Supervisor, Operations Training, two Senior Training Instructors, and two RO licensed operators from the operations group. On November 16, 1992, the simulator scenarios used for the operating section of the examination were validated on the facility's simulator. Facility staff who were involved with these reviews signed security agreements to ensure that the examination was not compromised.

3.0 PROCEDURAL ENHANCEMENTS, OBSERVATIONS AND CONCLUSIONS

Generic strengths and weaknesses of the candidates are not included in the report due to the small number of candidates. The examination results however indicate the candidates were well prepared for the examination.

3.1 Procedural Enhancements

During the preexamination review, the team identified the following procedure/documents that necessitated enhancements:

OP 100A, "Standby Diesel Generators," - Clarifications were made concerning parallel operations of the diesel generators.

Emergency Operating Procedure Basis Document - Clarifications were made concerning reactor pressure control strategy during steam cooling.

During the in-plant walk-through portion of the examination, the examiner identified the following procedures that needed enhancements:

OP 36B, "Redundant Reactivity Control System," - Clarifications were made concerning the automatic initiation of the Standby Liquid Control System.

OP 96, "Reactor Manual Control and Rod Position Indication System," - Inconsistency between plant labeling and procedure nomenclature was identified.

The licensee took prompt corrective actions to revise the station procedures and document.

3.2 Observations

3.2.1 Observations in The Simulator

During the simulator scenario verifications, the examiner noted several outdated documents in the simulator room. Outdated documents were not identified in the plant control room or in the Unit 1 simulator room. Also, a document not to be used for plant operations was identified to be in the simulator as well as the Unit 2 control room. The licensee removed all outdated materials from the simulator room and the inappropriate document from the Unit 2 control room. The examiner notes that document control was weak in the Unit 2 simulator room.

3.2.2 Observations in the Plant

Access into and through the plant was uneventful. The control room staff maintained an atmosphere conducive to the administration of the initial examination.

3.3 Conclusions

The licensee took prompt and corrective actions to revise station procedures as necessary. The licensee performed an effective preexamination review of the written examination. As a result, the licensee had no additional comments following the administration of the examination. The training staff was cooperative and helpful during the preparation and administration of the examination.

Outdated materials in the simulator room indicate weak document control in this area.

4.0 EXIT MEETING

An exit meeting was conducted November 20, 1992, following administration of the examinations. Exit attendees are listed in Attachment 3. The corrective actions taken by the licensee in response to the procedural enhancements were discussed.

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

CANDIDATE'S NAME: _____

FACILITY: NINE MILE POINT UNIT 2

REACTOR TYPE: BWR-GE5

DATE ADMINISTERED: 12/16/92

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	_____	____%

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

_____
Candidate's Signature

QUESTION: 001 (1.00)

A control room annunciator which has been defeated due to implementation of a temporary modification is identified with:

a. A green deficiency sticker on annunciator.

b. A blue mark up tag on annunciator.

c. A red mark up tag on annunciator.

d. A transparent red sticker on annunciator.

QUESTION: 002 (1.00)

A reduction of radiation levels can be made by submitting:

a. A Hot Spot reduction form.

b. A temporary shielding form.

c. An ALARA suggestion form.

d. A radiation survey request form.

QUESTION: 003 (1.00)

During power operations, a plant operator reports the discovery of a Core Spray system manual valve out of position. Your course of action is to:

a. Immediately correct the valve position and notify the CSO.

b. Immediately correct the valve position and notify the SSS.

c. DO NOT alter the valve position. Log in the Plant Operators log.

d. DO NOT alter the valve position. DO notify the SSS.

QUESTION: 004 (1.00)

During an Emergency situation, station manipulations are directed:

a. By the Operations Manager when in the EOF.

b. By the Operations Manager when in the TSC.

c. By the Emergency Director in the TSC.

d. By the Control Room SRO.

QUESTION: 005 (1.00)

Identify the event that DOES NOT require notification and responses according to the Site Emergency Plan.

a. Unusual Event

b. Operational Event

c. Alert event

d. Site Area Emergency event

QUESTION: 006 (1.00)

A Controlled Working Copy of a procedure shall be reverified for accuracy every:

a. 4 hours

b. 8 hours

c. 40 hours

d. 72 hours

QUESTION: 007 (1.00)

Personnel that have consumed alcohol and are notified of a declared emergency shall:

a. Inform the SSS upon arrival in the control room.

b. Inform the Emergency Director upon arrival in the EOF/TSC.

c. Not respond if unfit for duty.

d. Inform the plant manager upon arrival in the control room.

QUESTION: 008 (1.00)

A photo identification badge with "X-KEY" located below the photo indicates:

a. The individual is an escort.

b. The individual is a contractor.

c. The individual's office is off-site.

d. The individual is assigned a Vital Area key.

QUESTION: 009 (1.00)

A 25 year old radiation worker with a current Form NRC-4 and a previous lifetime whole body exposure of 26 Rems is allowed to receive: (Assume the worker's birthday is today)

a. 3 rem/quarter for 3 quarters in the year.

b. 3 rem/quarter not to exceed 5 rem total for the year.

c. 3 rem/quarter for the entire year.

d. 1.25 rem/quarter for the entire year.

QUESTION: 010 (1.00)

What is the abnormality of a white numeric field followed by a yellow "Q" when displayed on the Safety Parameter Display System (SPDS):

a. Reactor water level is high.

b. Reactor water level is low.

c. Reactor water level is low-low.

d. Reactor water level is in doubt.

QUESTION: 011 (1.00)

Why is allowable chloride ion concentration more restrictive during hot standby operations than at full power?

a. radiolytic breakdown of chlorine is high at low power.

b. corrosion is inhibited at higher temperatures and pressure.

c. dissolved oxygen is lower during full power.

d. low flow conditions increases chloride concentrations.

QUESTION: 012 (1.00)

During a plant startup all Intermediate Range Monitors (IRMs) indicate 40 on range 7. The correct course of action is to:

a. Uprange all IRMs to range 8.

b. Downrange all IRMs to range 6.

c. Insert control rods in reverse sequence.

d. Scram the reactor.

QUESTION: 013 (1.00)

Which one of the following would be considered a temporary modification.

a. Temporary installed fan to provide additional cooling to a motor that is running hot.

b. Lifting an electrical lead as part of a markup boundary.

c. Temporary hose connected for a system drain during maintenance.

d. Temporary catch containment under a valve during plant operations.

QUESTION: 014 (1.00)

During Steam Cooling, Emergency RPV Depressurization is REQUIRED when:

a. Reactor level reaches -14 inches.

b. Reactor level reaches -55 inches.

c. Reactor pressure reaches 700 psig.

d. Fuel element failure is evident.

QUESTION: 015 (1.00)

Supplemental cooling to the Spent Fuel Pool Cooling system is provided by the:

a. Service Water system.

b. Reactor Building Closed Cooling Water system.

c. Residual Heat Removal system.

d. Turbine Building Closed Cooling Water system.

QUESTION: 016 (1.00)

During refueling operations the mode switch is placed in Startup. Identify the effect on refueling operations.

a. Refueling interlocks are automatically bypassed.

b. Refueling Bridge grapple is prohibited from lifting a fuel bundle from the spent fuel pool.

c. Refueling Bridge is prohibited from moving toward the vessel.

d. A Control Rod Withdrawal block is generated if the Refueling Bridge grapple is loaded over the spent fuel pool.

QUESTION: 017 (1.00)

Identify the response of the Traveling Incore Probe (TIP) system to a Group 3 isolation signal.

a. Automatically withdraws to a shielded location inside the drywell and the ball valve closes.

b. Automatically withdraws to a shielded location inside the reactor building and the ball valve closes.

c. Must be manually withdrawn and then the shear valve actuates automatically.

d. Automatically withdraws to a shielded location inside the drywell if TIP system is in automatic mode.

QUESTION: 018 (1.00)

The Reactor Building Ventilation Lo Flow ISOL switches for DIV I and DIV II are placed in the OVERRIDE position to:

a. Prevent accidental restart of Reactor Building Supply and Exhaust Fans.

b. Override the Secondary Containment High/Low Pressure isolation of the Reactor Building Ventilation system.

c. Override the Secondary Containment High Radiation Level isolation of the Reactor Building Ventilation system.

d. Allow opening of the Reactor Building Ventilation system isolation dampers.

QUESTION: 019 (1.00)

When placing the standby set of CRD system Stabilizing Valves in service, what flow rate should be established through the valves?

a. 1.5 gpm

b. 2.5 gpm

c. 5.5 gpm

d. 16.5 gpm

QUESTION: 020 (1.00)

Identify the control room instrument used to monitor the reactor cooldown rate during Alternate Shutdown Cooling.

a. SRV Tailpiece Temperature recorder.

b. RHR Heat Exchanger outlet temperature recorder.

c. Recirculation Loop A and B temperature recorder.

d. Reactor Bottom Head temperature recorder.

QUESTION: 021 (1.00)

When in Alternate Shutdown cooling, the reactor cooldown rate is controlled by:

a. Opening or closing SRV's as required.

b. Throttling the RHR Heat Exchanger bypass valve in suppression pool cooling.

c. Placing in service additional RHR pumps in suppression pool cooling.

d. Throttling the LPCI or LPCS injection flowrate.

QUESTION: 022 (1.00)

Technical Specifications requires that at least 22 feet 3 inches of water be maintained over the top of irradiated fuel assemblies seated in the spent fuel storage racks.

Which one of the following is the basis for this requirement?

a. This level ensures that the radiation level at the surface of the pool will not exceed 10 mrem/hr.

b. This level ensures that an irradiated fuel assembly raised to the upper level on the refueling hoist will not expose the bridge operator to more than 10 mrem/hr.

c. This level ensures adequate flow through the skimmer surge tanks to remove decay heat.

d. This level ensures that 99% of the iodine released from the rupture of an irradiated fuel assembly will be absorbed by the water.

QUESTION: 023 (1.00)

Why is RHR Loop "B" the preferred loop for shutdown cooling when RPV coolant temperature is greater than 150 degrees and the RWCU system is isolated?

a. The discharge to radwaste can be cooled.

b. Prevents stratification in the RPV.

c. Provides bottom head temperature indication.

d. Allows the Recirculation pumps to be operated.

QUESTION: 024 (1.00)

The DIV I Diesel Generator is powering Bus 2ENS*SW101 at 3000KW following a loss of off site power. Which one of the following describes the operator's action to restore the bus to the offsite power supply?

a. Adjust the governor so that the sync scope is rotating slowly in the clockwise (fast) direction and close the offsite breaker at 5 minutes after 12. (one o'clock)

b. Adjust the governor so that the sync scope is rotating slowly in the counter-clockwise (slow) direction and close the offsite breaker at 5 minutes after 12. (one o'clock)

c. Adjust the governor so that the sync scope is rotating slowly in the clockwise (fast) direction and close the offsite breaker at 5 minutes before 12. (eleven o'clock)

d. Adjust the governor so that the sync scope is rotating slowly in the counter-clockwise (slow) direction and close the offsite breaker at 5 minutes before 12. (eleven o'clock)

QUESTION: 025 (1.00)

Why is Continuous Insert NOT allowed for normal rod movement?

a. Rod Drift alarm is bypassed.

b. The RMCS will initiate an Insert Rod Block.

c. Possible damage to the collet housing.

d. Possible damage to the CRD seals.

QUESTION: 026 (1.00)

During power operations and normal ventilation lineup, the following events occur:

Annunciator 870314 "Division I Special Filter Train A System Trouble" energizes
Computer points indicate a high temperature in the charcoal absorber.
The Fire Chief reports that the Special Filter is on fire.

Your immediate course of action is to:

a. Start the B Special Filter Train to force backflow through the A filter.

b. Verify that the Special Filter Train Fan FN2A trips on low flow.

c. Place the Special Filter Train A in the recirc mode.

d. Open the fire protection water valve to the charcoal absorber.

QUESTION: 027 (1.00)

Identify the condition that will result in the transfer of a recirculation pump from 60 Hz to 15 Hz.

a. Reactor water level at level 2.

b. Discharge valve not full open.

c. Total steam flow less than 4.35 mlb/hr.

d. Reactor water level at level 3.

QUESTION: 028 (1.00)

During Shutdown Cooling operations, the Maximum Service Water temperature out of an RHR Heat Exchanger is:

a. 110 degrees

b. 120 degrees

c. 130 degrees

d. 140 degrees

QUESTION: 029 (1.00)

RHS pump B is in shutdown cooling. To prevent exceeding the maximum cooldown rate and exceeding the maximum RHS service water outlet temperature requirements, your immediate action is to:

a. Throttle injection valve 2RHS*MOV40B if minimum flow valve is open.

b. Throttle injection valve 2RHS*MOV40B if Recirculation pump B is operating.

c. Throttle shut RHS Heat Exchanger 1B Inlet Bypass valve 2RHS*MOV8B.

d. Throttle injection valve 2RHS*MOV40B if Recirculation pump A is operating.

QUESTION: 030 (1.00)

The plant is in startup with RPV pressure at 500 psig. A valid LOCA signal is generated on abnormally low reactor water level. The operator places the LPCS Injection Valve control switch in the close position.

Under which of the following conditions will the LPCS injection valve reopen?

a. The LPCI/LPCS pushbutton is armed and depressed.

b. A High Drywell pressure signal is received.

c. Reactor pressure decreases to the pressure permissive setpoint.

d. The LOCA signal clears, the initiation logic is reset, and a high drywell pressure occurs.

QUESTION: 031 (1.00)

The HPCS valve surveillance is in progress. The operator has closed the CST suction valve CSH*MOV-101 and is opening the Suppression pool suction valve CSH*MOV-118 when a HPCS automatic initiation signal is received.

Which of the following will occur?

a. MOV-101 will remain closed and MOV-118 will continue to open.

b. MOV-118 will close and MOV-101 will open.

c. MOV-101 will remain closed and MOV-118 will close.

d. MOV-118 will continue open and MOV-101 will open.

QUESTION: 032 (1.00)

The plant is operating steady state with the following conditions:

Reactor Power 100%
RHR "A" in suppression pool cooling

Control room annunciator 601523 "ADS System Logic A Initiated" alarms.

This alarm indicates that:

a. Seven ADS valves will open in 105 seconds.

b. Reactor water level is Level 3.

c. ADS Logic A Manual Initiation pushbutton is armed and depressed.

d. Reactor pressure is high.

QUESTION: 033 (1.00)

When must the RCIC Trip Throttle valve be reset locally following a RCIC turbine trip?

a. High exhaust pressure trip of the turbine.

b. Electrical overspeed trip of the turbine.

c. Low reactor pressure

d. DIV I ECCS signal is present.

QUESTION: 034 (1.00)

If an IRM that is reading 40 on range 4 is placed on range 5, which of the following is expected to occur?

a. IRM downscale rod block

b. IRM upscale rod block

c. A half scram will occur

d. No automatic actions will occur.

QUESTION: 035 (1.00)

The energized amber light above the RCIC Suppression Pool suction valve control switch indicates that:

a. The breaker for this MOV is tripped.

b. The automatic suction swap-over is overridden.

c. The automatic suction swap-over has occurred.

d. The automatic suction swap-over failed to occur.

QUESTION: 036 (1.00)

The plant is operating at 100% power when the following events occur:

A steam flow to feed flow mismatch of about 0.8 mlb/hr
Generator output decreases about 70 MWe
RPV level increases, then decreases slightly lower than normal

Which one of the following is the cause of these events?

a. An SRV is open

b. A turbine bypass valve is open

c. A recirculation pump speed increase

d. A decreased level setpoint

QUESTION: 037 (1.00)

Which one of the following conditions does NOT directly input to the Recirculation Flow Control Valve Motion Inhibit Interlock?

a. High Drywell pressure

b. Level 2 water level

c. Control circuit failure

d. Hydraulic power unit failure

QUESTION: 038 (1.00)

The Residual Heat Removal (RHS) pump starting sequence after receipt of a LOCA signal with offsite power available is:

a. A and B RHS pumps start with a 5 second time delay and C pump starts after a 10 second time delay.

b. A and B RHS pumps start immediately and the C pump starts after a 5 second time delay.

c. A and B RHS pumps start immediately and the C pump starts after a 10 second time delay.

d. A and B RHS pumps start after a 10 second time delay and the C pump starts after a 15 second time delay.

QUESTION: 039 (1.00)

Given the following plant conditions:

Reactor Power 38%
Center rod selected
Two "C" level LPRM's are failed downscale

Which one of the following correctly describes the minimum LPRM failure combinations that will result in a Channel "A" RBM rod block?

a. 2 "A" level and 1 "C" level LPRMs fail downscale.

b. 1 "A" level and 1 "C" level LPRMs fail downscale.

c. 2 "A" level LPRMs fail downscale.

d. 1 "A" level LPRM fails downscale.

QUESTION: 040 (1.00)

The plant is at 100% power when a complete loss of 24 VDC occurs.

Which statement describes the plant response.

a. A loss of control room annunciator occurs.

b. A reactor scram occurs.

c. Rod block occurs.

d. Control room alarms occurs.

QUESTION: 041 (1.00)

Which one of the following events would result in the reactor vessel narrow range level instruments reading lower than actual reactor water level?

a. Elevated drywell temperature

b. Variable leg rupture

c. Rapid vessel depressurization

d. Oil leakage from Rosemont transmitter

QUESTION: 042 (1.00)

The plant is operating at 100% power when a leak causes drywell pressure to peak at 3.0 psig. The reactor scrams and reactor water level decreases to 170 inches before being restored to the normal band.

Select the group isolations that should have occurred.

a. Groups 2,3,5,9

b. Groups 3,4,5,7

c. Groups 1,2,4,8

d. Groups 3,4,8,9

QUESTION: 043 (1.00)

If a loss of power to the RRCS occurs, the effect on the Standby Liquid Control (SLS) system is:

a. The squib valves will not fire.

b. The SLS pumps loose control power.

c. SLS tank level indication at 2CEC*P601 is lost.

d. SLS pumps will not start manually.

QUESTION: 044 (1.00)

The RRCS has actuated on Reactor Water level at Level 2. The RRCS will:

a. Provide an input to RPS to scram the plant.

b. Trip the Recirculation pumps.

c. Initiate Recirculation pumps transfer to slow speed.

d. Immediately isolate the Reactor Water Cleanup system.

QUESTION: 045 (1.00)

The seal cooling flow to the RWCU pumps shall not exceed 16 gpm because:

a. Excessive flow may damage RWCU pump seals.

b. Excessive flow may thermal shock the RWCU pump casings.

c. Excessive flow may overpressurize the RWCU pump casings.

d. Excessive flow may affect minimum scram accumulator pressures.

QUESTION: 046 (1.00)

The Rod Worth Minimizer Low Power Set Point is provided by the:

a. Nuclear Instrumentation system.

b. Main Turbine 1st stage pressure signal.

c. Feedwater Control system.

d. Recirculation Flow Control system.

QUESTION: 047 (1.00)

During a plant startup at 15% power, the Rod Sequence Control system becomes inoperable. The effect on the Control Rod Drive system is:

a. Control rods CAN be withdrawn but NOT inserted.

b. Control rod CAN be inserted but NOT withdrawn.

c. No effect if Rod Worth Minimizer is in service.

d. Rod insertions and withdrawals are blocked.

QUESTION: 048 (1.00)

The Reactor Mode Switch has been placed in Shutdown. As a result:

a. The Reactor Protection System will automatically reset after 10 seconds.

b. The Mode Switch to shutdown scram signal must be manually reset after 10 seconds.

c. The Mode Switch to shutdown scram signal will automatically be bypassed after 10 seconds.

d. The Mode Switch in shutdown automatically bypasses the Reactor Protection System.

QUESTION: 049 (1.00)

The Diesel Generator 2EGS*EG1 LOCA bypass switch in the "ON" position will:

a. Prevent ECCS components in this division from automatically loading after 2EGS*EG1 starts.

b. Allow ECCS components in this division to start automatically if off site power is available.

c. Allow ECCS components to be manually loaded after 2EGS*EG1 starts.

d. Prevent 2EGS*EG1 from starting on a LOCA signal.

QUESTION: 050 (1.00)

The High Pressure Core Spray (HPCS) system is injecting during an emergency situation when the associated diesel engine's Main Fuel oil pump fails.

Your immediate action is to:

a. Inform the SSS that HPCS is unavailable for injection.

b. Have the motor driven fuel pump started, then restart the engine manually.

c. Depress the Safe Shutdown Reset pushbutton, reset the Trouble Lock Out relay and the engine will restart automatically if the LOCA signal is still present.

d. Continue to monitor HPCS injection.

QUESTION: 051 (1.00)

A LOCA occurs concurrent with a loss of offsite power.

Which one of the following pumps will NOT automatically restart when electrical power is restored by the diesel generators?

a. CRD pumps

b. RHR pumps

c. Low pressure core spray pumps

d. Service water pumps

QUESTION: 052 (1.00)

The plant is operating at 100% power when ONE steam flow signal to the feedwater control system fails downscale.

Which one of the following describes the plant response? (Assume no operator actions.)

a. The feed pumps will lockup.

b. The recirculation pumps will lockup.

c. The main turbine will trip on high level.

d. Reactor level will stabilize at a lower level.

QUESTION: 053 (1.00)

The following plant conditions exist:

Reactor mode switch is in startup
A plant heatup is in progress
IRM "A" has failed upscale and is BYPASSED.

Which one of the following is the expected response if IRM "A" is taken out of BYPASS?

a. IRM downscale rod block and half scram.

b. IRM upscale rod block and half scram.

c. IRM upscale rod block only.

d. IRM downscale rod block only.

QUESTION: 054 (1.00)

The reactor is critical with power in the SRM range. Annunciator SRM SHORT PERIOD is received as you are withdrawing SRM detector B. SRMs A, C, and D indicate reactor power is NOT changing.

Your action to take is to:

a. Insert SRM B and notify the SSS.

b. Insert control rods in reverse sequence.

c. Continue withdrawing SRM B.

d. Bypass SRM B until the alarm clears.

QUESTION: 055 (1.00)

The APRM flow units have a 10% mismatch trip associated with them.

Which one of the following defines when the mismatch occurs?

a. Total core flow differs from total loop flow by 10%.

b. Recirculation loop flows differs from jet pump total flow by 10%.

c. Total core flow differs from the flow biased scram setpoint by 10%.

d. One flow unit differs from an associated flow unit by 10%.

QUESTION: 056 (1.00)

Which one of the following describes the operation of the Backup Scram Valves?

a. They are powered from the RPS Buses A and B

b. They are opened by the Alternate Rod Insertion signal.

c. RPS channel A or B signal opens any Backup Scram valve.

d. RPS channel A and B signals opens any Backup Scram valve.

QUESTION: 057 (1.00)

Select the statement that describes the operation of the Safety Relief Valves from the Remote Shutdown Panel when operating in the Appendix R mode.

a. The valves will open automatically in the Safety Mode.

b. The valves will open automatically in the relief mode only.

c. The valves will open automatically in the ADS mode only.

d. The valves will open automatically in the relief mode AND ADS modes.

QUESTION: 058 (1.00)

To flood containment with the Service Water system, the injection path would be through the:

a. Low Pressure Core Spray A

b. Low Pressure Core Spray B

c. RHR system A

d. RHR system B

QUESTION: 059 (1.00)

The plant is operating at 25% power when the main condenser vacuum decreases to 22" Hg vacuum.

Which one of the following is the expected plant response?

a. Turbine trip without bypasses, reactor scram on high pressure

b. Turbine trip and reactor scram

c. Turbine trip

d. MSIV closure, reactor scram

QUESTION: 060 (1.00)

During power operations, a loss of feedwater event results in a reactor scram and all rods fully insert. All RPV water level indications indicate full scale IMMEDIATELY after the scram.

Which of the following is your immediate action?

a. Inject with all available makeup sources until RPV pressure increases.

b. Terminate all RPV injections until RPV level indications are on scale.

c. Start a cooldown not to exceed 100 degrees/hr.

d. Prepare to flood the RPV.

QUESTION: 061 (1.00)

Following a steam line break in the primary containment, suppression chamber sprays were initiated. Suppression chamber pressure immediately equalized with drywell pressure.

Which of the following could have caused this response?

a. Expected response to suppression chamber spray.

b. Drywell/suppression chamber vacuum breakers were cycling.

c. Rapid change in suppression chamber pressure decreased level in downcomers.

d. A downcomer has failed.

QUESTION: 062 (1.00)

Identify the limit, that IF exceeded, DOES NOT REQUIRE an Emergency Depressurization.

a. Heat Capacity Level Limit

b. Heat Capacity Temperature Limit

c. Drywell Spray Initiation Limit

d. Pressure Suppression Pressure Limit

QUESTION: 063 (1.00)

Containment level is 298.52 ft. following a large break LOCA and ECCS injections.

The correct course of action is to:

a. Terminate all injections into the RPV.

b. Secure core spay and LPCI.

c. Immediately vent primary containment.

d. Terminate all injections sources external to containment.

QUESTION: 064 (1.00)

A reactor scram has occurred and all control rods are NOT inserted.

Which one of the following methods for inserting control rods REQUIRES the scram signal to be reset?

a. Inserting a manual scram

b. Venting the overpiston area

c. Venting scram air header

d. De-energizing the scram solenoids

QUESTION: 065 (1.00)

Which of the following would be a Safety Limit Violation?

a. The MCPR is found to be greater than 1.08 during power operations.

b. Drywell pressure peaked at 4.7 psig.

c. MSIVs closed due to instrument failure.

d. Reactor pressure peaked at 1335 psig. after a scram.

QUESTION: 066 (1.00)

During steam cooling, with RPV level at -14 inches and decreasing, which of the following methods is used for pressure control.

a. Maintain one SRV open at all times.

b. Manually open SRVs as necessary to maintain pressure control.

c. Allow SRVs to automatically operate in the relief mode.

d. Manually open 7 ADS valves.

QUESTION: 067 (1.00)

What is the Maximum Core Uncovery Time Limit?

a. The amount of time the core may remain uncovered and uncooled without core damage.

b. The amount of time the ECCS systems may remain secured before core damage may result.

c. The time allowed to establish the correct RPV pressure above suppression chamber pressure.

d. The time for the ECCS systems to reflood the core following a Design Basis Accident.

QUESTION: 068 (1.00)

During an ATWS, an Emergency Depressurization is conducted.

Which one of the following describes when injection to restore and maintain RPV level shall be initiated?

a. When RPV level reaches top of active fuel.

b. When RPV level reaches the Minimum Zero Injection level.

c. When reactor power is less than 4%.

d. When reactor pressure is less than the Minimum Alternate RPV Flooding Pressure.

QUESTION: 069 (1.00)

While performing surveillance testing on the Control Building Ventilation system, a technician inadvertently deenergizes Radiation Detectors 2HVR*RE18A and 2HVR*RE18C.

Which one of the following is the response of the HVC system?

a. Special Filter bypass valves 2HVR*MOV1A/1B open and both booster fans 2HVC*FN1A/1B start.

b. Special Filter bypass valve 2HVC*MOV1A closes and booster fan 2HVC*FN1A starts.

c. Special Filter bypass valves 2HVC*MOV1A/1B close and booster fan 2HVC*FN1A starts.

d. Special Filter bypass valve 2HVC*MOV1A opens and booster fan 2HVC*FN1A starts.

QUESTION: 070 (1.00)

During Suppression Chamber spray, the spray flow is:

a. 450 gpm

b. 6350 gpm

c. 7450 gpm

d. 7940 gpm

QUESTION: 071 (1.00)

The RHR Emergency Refill operation is conducted ONLY after:

a. The RHR pump trips, and Shutdown Cooling is lost.

b. The RHR pump trips, and LPCI injection is required.

c. The RHR system becomes depressurized during plant operations.

d. The RHR pump trips during drywell spraying, and spray flow is required.

QUESTION: 072 (1.00)

During the startup of the Main Turbine, shell warming differential expansion indicates a Rotor Long condition.

Which of the following actions are required?

a. Stop shell warming and return the unit to the turning gear.

b. Continue shell warming until differential expansion has returned to center scale.

c. Increase chest warming until differential expansion has returned to center scale.

d. Increase turbine RPM above critical speed.

QUESTION: 073 (1.00)

During 100% power operations, the alarm "GENERATOR AUXILIARIES TROUBLE" energizes. The process computer identifies the alarm as "GENERATOR CORE MONITOR".

Your immediate action is to:

a. Immediately Scram the reactor and trip the turbine.

b. Maintain load and initiate a work request to investigate the cause.

c. Place the voltage regulator in manual and reduce reactive load until the alarm clears.

d. Reduce load until the alarm clears. (Including removing excitation if necessary)

QUESTION: 074 (1.00)

With the plant operating at 100% power, ALL Off Gas system Freeze-Out Dryers become isolated and will not be returned to service for 1 hour.

What is your immediate action?

a. Bypass the Off Gas Charcoal system.

b. Isolate one train of charcoal adsorbers.

c. Start the mechanical vacuum pump.

d. Initiate a rapid power reduction.

QUESTION: 075 (1.00)

A plant heatup is in progress. Which of the following actions is required prior to exceeding 180 degrees?

a. Secure Condensate and feedwater long cycle flush.

b. Return condenser low vacuum bypass switches to NORMAL.

c. Open Group I,II and III steam drain valves.

d. Place a Condensate Demin in service.

QUESTION: 076 (1.00)

The plant is at 35% power. Condensate Booster Pumps A and B are in service. Condensate Booster Pump C is in standby.

A High Vibration condition develops with the Condensate Booster Pump A.

Which of the following actions is required?

a. Start the Standby pump using bus 2NPS-SWG-001, then secure pump A.

b. Reduce power to 15% and then trip the A pump.

c. Immediately trip pump A, allow C to start automatically.

d. Increase power to reduce pump vibration.

QUESTION: 077 (1.00)

The Emergency Diesel Generator EDG*1 has energized bus 2ENS*SWG101 following a loss of offsite power.

Manual loading of bus 2ENS*SWG101 prevented until:

a. The bus is restored to offsite power source.

b. The load shedding is complete.

c. The LOCA signal is reset.

d. The 70 second timer times out.

QUESTION: 078 (1.00)

2VBB-UPS 1A has experienced a loss of both the normal AC and the DC inputs.

Which of the following describes the operation of on 2VBB-UPS 1A?

a. An operator must be sent to transfer 2VBB-UPA 1A to the maintenance AC source and when power is restored it will auto shift back to the normal power source.

b. 2VBB-UPS 1A will auto shift to the maintenance AC source and when power is restored an operator must be sent to restore the normal power supply.

c. 2VBB-UPS 1A will auto shift to the maintenance AC source and when power is restored it will auto shift back to the normal power supply.

d. 2VBB-UPS 1A will auto shift to the maintenance DC source and when power is restored an operator must be sent to restore the normal power supply.

QUESTION: 079 (1.00)

The reactor is operating at full power with Feedwater control in Automatic mode when the Redundant Reactivity Control System [RRCS] Manual Initiation Switches on the Reactor Control Panel are Armed and Depressed.

Rods do NOT insert and reactor power remains 100 percent.

Which of the following describes the AUTOMATIC plant response?

a. Boron is injected by SLS and Reactor Water Cleanup is isolated.

b. Feedwater Control valves fully shut and Recirculation pump motors are tripped.

c. Feedwater Control Valves fully shut and Recirculation pumps transfer to LFMG.

d. The main turbine is tripped and Recirculation pumps transfer to LFMGs.

QUESTION: 080 (1.00)

A reactor startup is in progress and rods are being withdrawn. The next rod to be withdrawn will not move and appears to be stuck at position 00. In accordance with N2-OP-30, drive water pressure is to be increased.

Which one of the following describes the normal method in which drive header pressure is increased?

a. Nitrogen Pressure in the affected rod accumulator is increased in 50 psig increments.

b. The second CRD pump is started and placed in service.

c. The CRD hydraulic Pressure Control Valve, 2RDS-PV101, is incrementally throttled shut.

d. The CRD hydraulic Flow control valve is placed in manual and incrementally opened.

QUESTION: 081 (1.00)

A reactor startup is in progress with both recirculation pumps idle. The reactor shell temperature at P614 is 195 degrees.

Which of the following conditions is required to allow start of the 1A recirculation pump?

a. The steam dome to reactor vessel bottom head drain delta T is 150 degrees.

b. The 1A recirculation pump suction temperature is 125 degrees.

c. The 1A Flow Control Valve is in Manual.

d. The 1A discharge valve is closed.

QUESTION: 082 (1.00)

Reactor power is being increased while both recirculation pumps are on LFMGs. It is desired to upshift the 1A recirculation pump.

Which of the following conditions would allow transfer of the 1A pump to 60 Hertz?

a. Reactor vessel water level is 157 inches

b. The 1A recirculation pump speed is 25 percent

c. The steam dome temperature from steam tables is 18 degrees higher than the 1A recirculation loop suction temperature

d. The feedwater flow 30 percent interlock white light is ON

QUESTION: 083 (1.00)

The reactor is operating at full power.

Which of the following conditions will cause the Reactor Water Cleanup Pumps [WCS] to trip ?

a. The 1A recirculation pump trips

b. The B SLS switch is placed in RUN

c. A feedwater transient causes water level to drop to 154 inches

d. The 4B filter demin flow drops to 80 percent of normal

QUESTION: 084 (1.00)

The reactor is shutdown in Condition 4.

Which of the following describes a permissible RHR shutdown cooling lineup?

a. Suction from the B recirculation pump discharge thru the A RHR pump and heat exchanger with return to the RCIC spray nozzle.

b. Suction from the A recirculation pump suction thru the A RHR pump and heat exchanger with return to the A recirculation pump discharge.

c. Suction from the B recirculation pump suction thru the B RHR pump and heat exchanger with return to the RCIC spray nozzle.

d. Suction from the A recirculation pump discharge thru the B RHR pump and heat exchanger with return to the B feedwater header.

QUESTION: 085 (1.00)

The plant is being placed in a shutdown cooling lineup. The RHR pump is started but the SDC return valve, RHS*MOV-40B, will not open.

Which of the following actions is required?

a. Open Injection valve RHS*MOV-24B

b. Open the Minimum Flow Valve, RHS*MOV-4B

c. Secure the RHR pump within 15 seconds

d. Lineup the RHR pump to the Spent Fuel Pool by opening SFC-100A

QUESTION: 086 (1.00)

The reactor has scrammed and water level is decreasing. LPCI pump B is unavailable and Alternate Level Control is to be used to restore water level.

Which one of the following systems is NOT available to supply water to the reactor using the LPCI-B piping and available piping penetrations?

[Assume NO temporary hoses are to be used]

a. Service Water

b. Condensate Transfer

c. Fire Water

d. LPCI B Keepfull

QUESTION: 087 (1.00)

With the plant operating at full power, the following Offgas system annunciators alarm:

Offgas System Trouble
High Inlet Temperature System A & B
High Inlet Pressure System A & B

The alarms are acknowledged and reset. Select the cause for the alarms:

a. Trip and automatic start of Offgas Recombiners

b. Hydrogen detonation in the Offgas system

c. Release of Xenon from a charcoal bed

d. Isolation of the Steam Jet Air Ejectors

QUESTION: 088 (1.00)

The reactor is operating at 100 percent power when an inadvertent automatic shutdown of the Offgas system occurs. It is soon determined that restoration of Offgas will not occur.

Select the appropriate operator action:

a. Reduce power by throttling 2RCH*HYV17A and B, then transfer recirculation to LFMGs, and then insert the CRAM rods

b. Reduce power using recirculation to no lower than 45 percent of rated (49 mlb/hr), transfer recirculation flow control to LOOP MANUAL, and then insert the CRAM rods

c. Reduce power with recirculation to approximately 40 percent of rated flow (44 mlb/hr), transfer recirculation to LOOP MANUAL, and insert the CRAM rods

d. Reduce power by transfering both recirculation pumps to low speed by placing both CB-5 control switches to "Transfer LFMG."

QUESTION: 089 (1.00)

The Division I Emergency Diesel Generator is operating loaded following a LOCA and loss of off site power.

Which one of the following will cause the engine to trip?

a. Jacket Water Hi temperature condition.

b. Low Lube oil pressure.

c. Engine Hi vibrations.

d. Engine overspeed.

QUESTION: 090 (1.00)

The reactor is at full power. A fault occurs in electrical breaker 2NNS-SWG016 causing the breaker to open.

Which of the following states the result of the breaker trip on 4160v electrical bus 2ENS*SWG101 ?

a. The bus is not affected and remains energized from its normal source, 2NNS-SWG018

b. The bus becomes deenergized, the Division I diesel starts, and the bus is reenergized when the diesel breaker automatically closes. Loads are simultaneously restored with power.

c. Load shedding occurs when the bus becomes deenergized, the Division I diesel starts and the bus is reenergized when the diesel breaker automatically closes. Loads are restored in accordance with a timer sequence.

d. An auto-transfer to the alternate offsite power source, 2NNS-SWG018, occurs. The Division I diesel starts but the breaker does not close onto the bus. Loads are simultaneously restored when the alternate breaker shuts.

QUESTION: 091 (1.00)

Which one of the following describes the operation of an uninteruptable power supply [UPS] used to power the RPS Scram logic?

a. The normal AC supply is rectified to DC, then inverted to AC and filtered to the output. [1] a battery and [2] a maintenance AC supply provide redundant power sources used in that order if the normal AC is lost.

b. The normal DC supply is inverted to AC and filtered to the output. A backup AC is supplied directly to the loads if the normal supply is interrupted. A third AC supply is available for maintenance and must be manually aligned to the loads.

c. The normal DC supply is inverted to AC and filtered to the output. A backup DC supply [battery] is available if the normal supply is lost. A third supply, AC, is provided directly to the loads if the normal and backup supplies are unavailable.

d. The normal AC supply is provided directly to the output. A backup DC supply [battery] is inverted and supplied to the loads if the normal supply is lost. A third AC supply is available for maintenance and must be manually aligned to the loads.

QUESTION: 092 (1.00)

Which of the following fire protection systems is provided for extinguishing a main generator hydrogen fire ?

a. Fire Protection Water

b. Fire Protection Foam

c. Fire Protection CO2

d. Fire Protection Halon

QUESTION: 093 (1.00)

A reactor scram has occurred. Drywell pressure is 2.3 psig.

Which of the following describes the operational lineup of the Secondary Containment Ventilation System in the area of the Reactor Building below the refueling floor?

a. Outside air is drawn thru two inlet louvers, circulated through Reactor Building, and exhausted through the Standby Gas Treatment System.

b. Outside air is drawn thru two inlet louvers, circulated through the Reactor Building, and exhausted through the Offgas System.

c. The Reactor Building normal supply and exhaust isolation dampers are shut, and recirculated air is passed through the Standby Gas Treatment System to maintain the Reactor Building at a negative pressure.

d. The Reactor Building normal supply and exhaust isolation dampers are shut and recirculated air is passed through the Offgas System to maintain the Reactor Building at a negative pressure.

QUESTION: 094 (1.00)

Select the statement which describes the correct operation of the Rod Block Monitor (RBM) system.

a. The "A" RBM will be automatically bypassed if APRM "A" reads LESS THAN 30% reactor power.

b. The RBM "B" reference APRM will automatically swap from APRM "D" to APRM "B" if APRM "D" is bypassed.

c. The RBM system is automatically bypassed when the reactor mode switch is in the RUN position.

d. The RBM system is bypassed when an edge control rod is selected.

QUESTION: 095 (1.00)

During reactor operation, a Group I isolation occured on Area High Temperature. Reactor inventory continues to be lost from unidentified leakage.

Which of the following plant components is a possible source of the continued leakage?

a. Reheater steam supply valve [AOV-92A] stem leakage

b. Stuck open turbine bypass valve

c. RCIC steam supply valve [MOV-128] stem leakage

d. WCS Return to Feedwater isolation valve WCS*MOV200 stem leakage.

QUESTION: 096 (1.00)

The reactor is operating at 27 percent power. The A inboard MSIV control switch [on control room panel 602], is placed in TEST, and the corresponding TRIP TEST pushbutton is depressed.

Which of the following describes the response of the A inboard MSIV ?

a. Air bleeds off the opening chamber of the MSIV and the closing chamber is pressurized to stroke the MSIV closed in 3-5 seconds.

b. Air is blocked to the 3-way valve allowing the opening chamber to slowly depressurize and the springs to slowly shut the MSIV.

c. Air bleeds off the opening chamber of the MSIV and the closing chamber is pressurized to shut the MSIV in less than 2 seconds.

d. Air is blocked to the 3-way valve causing the MSIV to indicate in the mid-position, but no valve motion will occur.

QUESTION: 097 (1.00)

The condensate system is aligned with two condensate pumps running, the third condensate pump in STANDBY, and two condensate booster pumps are running.

Which of the following signals provides a direct auto-start of the third condensate pump ?

a. Low feedwater pump suction pressure

b. Hotwell high level

c. Low suction pressure for an operating booster pump

d. SJAE inter-condenser high pressure

QUESTION: 098 (1.00)

The reactor is operating at full power. ALL of the following abnormal conditions will cause the main turbine stop valves to close by energizing the Master Trip Relay EXCEPT:

a. Reactor Water Level 8

b. Loss of both primary and backup Main Turbine Speed signals

c. Main Condenser Vacuum 21 inches Hg

d. Main Steam Line High Flow [104 psid]

QUESTION: 099 (1.00)

In response to a steam leak in the drywell the "B" loop of RHR was placed in Drywell and suppression chamber spray simultaneously.

Select the AUTOMATIC system response when the high drywell pressure initiation subsequently clears:

a. Drywell spray isolates and suppression chamber spray continues

b. Drywell spray continues and suppression chamber spray isolates

c. Drywell and suppression chamber sprays isolate

d. Drywell and suppression chamber sprays continue

QUESTION: 100 (1.00)

Which of the following conditions requires placing Battery 1A on an equalizing charge?

a. The temperature compensated pilot cell specific gravity is 1.2.

b. The AC power was lost to the charger for 5 minutes.

c. The lowest cell voltage with the battery on float is 135 volts.

d. The charger output in float mode is 135 volts.

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

A N S W E R K E Y

MULTIPLE CHOICE

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

A N S W E R K E Y

046	c	069	b
047	d	070	a
048	c	071	d
049	d	072	b
050	d	073	d
051	a	074	d
052	d	075	a
053	b	076	a
054	c	077	d
055	d	078	b
056	d	079	a
057	a	080	c
058	d	081	c
059	c	082	c
060	d	083	b
061	d	084	b
062	c	085	c
063	d	086	c
064	a	087	b
065	d	088	b
066	c	089	d
067	a	090	c
068	d	091	a

A N S W E R K E Y

092 c

093 c

094 d

095 c

096 b

097 c

098 d

099 b

100 a

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

ATTACHMENT 2

SIMULATION FACILITY REPORT

Facility Licensee: NPF-69

Facility Docket No.: 50-410

Operating Test Administered on: November 16, 1992

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of 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 which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed.

ITEM	DESCRIPTION

There were no observations of simulator deficiencies.