

UNITED STATES NUCLEAR REGULATORY COMMISSION REGION II 101 MARIETTA STREET, N.W. ATLANTA, GEORGIA 30323

ENCLOSURE 1

EXAMINATION REPORT - 50-424/OL-90-02

Facility Licensee:

Georgia Power Company

40 Inverness Center Parkway

P. O. Box 1295

Birmingham, AL 35201

Facility Name:

Vogtle Electric Generating Plant

Facility Docket No .:

50-424 and 50-425

Facility License No.:

NPF-68 and NPF-81

Examinations were administered at Vogtle Electric Generating Plant near Waynesboro, Georgia.

Chief Examiner:

Richard D. McWhorter, Jr.

Date Signed

Approved by:

John F. Munro, Chief

Operator Licensing Section 1 Division of Reactor Safety Date Signed

SUMMARY

Examinations were administered on June 25-28, 1990.

Written examinations and operating tests here administered to six SRO applicants all of whom passed.

REPORT DETAILS

1. Facility Employees Contacted:

- *K. Holmes, Plant Training and Emergency Planning Manager
- *R. Dorman, Operations Superintendent of Training
- *R. Brown, Operations Training Supervisor (Initial)

*J. Swartzwelder, Operations Manager

- *T. Green, Assistant General Manager, Plant Support
- *Attended Exit Meeting

2. Examiners:

- *R. McWhorter, NRC, Region II
- R. Laufer, NRC Headquarters
- W. Dean, NRC, Headquarters
- *Chief Examiner

3. Written Examination:

The written examination was reviewed prior to administration by facility personnel and comments were resolved. The facility had no comments following examination administration.

4. Exit Meeting:

At the conclusion of the site visit, the examiners met with representatives of the plant staff to discuss the results of the examinations.

One procedural problem noted during an examination walkthrough was discussed. The RNO for VEGP-19251 step 6.a gave inadequate operator direction for how to respond if the Containment Spray sump suction valves (encapsulated) failed to open remotely. This item was passed on to the NRC Resident Inspector for follow-up, and the facility has since initiated a change to the procedure.

The accommodations made by the facility for administering the exam and the help in administering the simulator exams were noted as very good and professional.

The licensee did not identify as proprietary any material provided to or reviewed by the examiners.

UNITED STATES NUCLEAR REGULATOR COMMISSION

ENCLOSURE 2



OPERATOR LICENSING EXAMINATION

NRC Official Use Only

Nuclear Regulatory Commission Operator Licensing Examination

This document is removed from Official Use Only category on date of examination.

NRC Official Us Only

U. S. NUCLEAR REGULATORY COMMISSION SENIOR REACTOR OPERATOR LICENSE EXAMINATION REGION 2

	FACILITY:	Vogtle 1
	REACTOR TYPE:	PWR-WEC4
	DATE ADMINISTERED:	90/06/25
	CANDIDATE:	
INSTRUCTIONS TO CANDIDATE:		

Points for each question are indicated in parentheses after the question. To pass this examination, you must achieve an overall grade of at least 80%. Examination papers will be picked up four and one half (4 1/2) hours after the examination starts.

QUESTIONS	POINTS	CANDIDATE'S POINTS	CANDIDATE'S OVERALL GRADE (%)
100	100.00		

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

Candidate's Signature

NRC RULES AND GUIDELINES FOR LICENSE EXAMINATIONS

During the auministration of this examination the following rules apply:

- 1. Cheating on the examination means an automatic denial of your application and could result in more severe penalties.
- 2. After the examination has been completed, you must sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination. This must be done after you complete the examination.
- 3. Restroom trips are to be limited and only one candidate at a time may leave. You must avoid all contacts with anyone outside the examination room to avoid even the appearance or possibility of cheating.
- 4. Use black ink or dark pencil only to facilitate legible reproductions.
- 5. Print your name in the blank provided in the upper right-hand corner of the examination cover sheet.
- Use only the answer sheets provided. Credit will only be given for answers properly marked on these sheets. Follow the instructions for filling out the answer sheets.
- 7. Print your name in the upper right-hand corner of each answer sheet.
- 8. Partial credit will NOT be given on multiple choice questions.
- 9. If the intent of a quertion is unclear, ask questions of the examiner only.
- 10. When turning in your examination, assemble the completed examination with examination questions, examination aids and answer sheets. In addition, turn in all scrap paper.
- 11. To pass the examination, you must achieve an overall grade of 80% or greater.
- 12. There is a time limit of (4 1/2) hours for completion of the examination.
- 13. When you are done and have turned in your examination, leave the examination area as defined by the examiner. If you are found in this area while the examination is still in progress, your license may be denied or revoked.

EQUATION SHEET

SUR -
$$\frac{26.06 (\lambda_{eff} \rho)}{(\beta - \rho)}$$

$$M = 1/(1 - K_{eff}) = CR_2/CR_0$$

- 1 Curie 3.7 x 1010 dps
- 1 hp 2.54 x 103BTU/hr
- 1 BTU 778 ft-1bf
- *0 5/9 (*F 32)

- 1 kg 2.21 1bm
 - 1 Mw 3.41 x 106 BTU/hr
 - ·F 9/5 ·C + 32

QUESTION: 001 (1.00)

Given the following conditions:

- reactor power 90%
- rods in automatic
- power range channel N41 fails high

Which one of the following will be the initial response of the rod control system with no operator action?

- a. all rods will be inserted by a reactor trip
- b. rods will 'tep in at 48 steps per minute
- c. rods will step in at 72 steps per minute
- d. rods will not move due to the C-2 rod stop being in effect

QUESTION: 002 (1.00)

Which one of the following is the status of the reactor trip breaker coils during normal power operations?

- UV energized from 125vdc, shunt energized from 48vdc, auto shunt de-energized
- UV energized from 48vdc, shunt de-energized, auto shunt energized
- UV energized from 125vdc, shunt de-energized, auto shunt de-energized
- d. UV energized from 48vdc, shunt energized from 125 vdc, auto shunt energized

QUESTION: 003 (1.00)

Given the following conditions:

- reactor power 75%
- RCP 1 CONTROLLED LKG HI/LO FLOW alarm
- No. 1 seal leakoff flow indicates 8 gpm

Which one of the following actions should be taken?

- a. isolate no. 1 seal leakoff and continue operating
- b. isolate no. 1 seal leakoff and stop the RCP within 30 min.
- c. initiate 18005-1 "Partial Loss of Flow" and stop the RCP
- d. trip the reactor , initiate 19000-1 "E-0 Reactor Trip or Safety Injection", and stop the RCP

QUESTION: 004 (1.00)

Which one o' the following conditions would require the trip of the affected reactor coolant pump (RCP)?

- a. shaft vibration of 5 mils
- b. seal water inlet temperature 200 degrees F
- c. motor bearing temperature 150 degress F
- d. pump bearing temperature 250 degrees F

QUESTION: 005 (1.00)

Seal injection flow decreases below its normal rate of 32 gpm. Assuming a normal system alignment which one of the following will normally be used to change the position of charging flow control valve HV-182 and restore seal injection flow?

- a. a low flow signal will automatically open HV-182
- b. a low flow signal will automatically close HV-182
- c. HV-182 will be opened manually
- d. HV-182 will be closed manually

QUESTION: 006 (1.00)

Volume Control Tank (VCT) level is at 28% in the automatic makeup mode when level transmitter LT-185 fails high. Which one of the following statements describes the subsequent system response assuming no operator action?

- a. VCT high level alarm will sound but letdown will not divert until 2/2 high level signals are received.
- b. letdown flow will immediately divert to the Recycle Holdup Tank
- c. automatic makeup will stop
- d. VCT level will control normally since LT-112 is still functioning properly

QUESTION: 007 (1.00)

Which one of the following groups of plant parameters are inputs for the Engineered Safety Features Actuation System?

- a. RCS Loop Pressure Containment Pressure RCS Temperature
- b. RCS Loop Pressure Pressurizer Level Steam Line Pressure
- c. Pressurizer Pressure Pressurizer Level RCS Temperature
- d. Pressurizer Pressure Containment Pressure Steam Line Pressure

QUESTION: 008 (1.00)

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Which one of the following conditions is required prior to resetting an inadvertant Safety Injection (SI)?

- a. Containment Isolation Phase A must be reset
- b. any ECCS pumps which started must be stopped
- c. less than 60 seconds must have elapsed since SI was activated.
- d. P-4 signal must be present

QUESTION: 009 (1.00)

Which one of the following inputs does the Rod Insertion Limit (RIL) computer use to calculate the Rod Bank Low-Low Limit Alarm setpoint?

- a. turbine impulse pressure
- b. auctioneered high nuclear power
- c. Tavg Tref deviation
- d. core delta T

QUESTION: 010 (1.00)

Which one of the following conditions would cause a Digital Rod Position Indication (DRPI) Rod Deviation Alarm?

- a. Data A and Data B failure
- b. urgent alarm affecting one rod
- c. 5 bit difference between A and B position data
- d. rod sequence error

QUESTION: 011 (1.00)

Which one of the following describes the effect of an UNDERCOMPENSATED intermediate range channel following a reactor trip?

- a. indicates high preventing P-6 from automatically energizing the source range due to not satisfying the required 2 of 2 coincidence
- b. indicates low prematurely energizing the source range by satisfying the required 1 of 2 coincidence
- c. indicates high but the source range will be energized by P-6 from the other channel satisfying the required 1 of 2 coincidence
- d. indicates low but the source range will not be energized until P-6 is supplied from the other channel and satisfies the required 2 of 2 coincidence

QUESTION: 012 (1.00)

Which one of the following is the response of the containment cooling fans to an SI actuation?

- a. The SI sequencer will start all fans in high speed after 30.5 seconds.
- b. The SI sequencer will start all fans in low speed after 30.5 seconds.
- c. The SI sequencer will start fans 3,4,5,6 in high speed after 30.5 seconds and then 20 seconds later start fans 1,2,7,8.
- d. The SI sequencer will start fans 3,4,5,6 in low speed after 30.5 seconds and then 20 seconds later start fans 1,2,7,8 in low speed.

QUESTION: 013 (1.00)

Which one of the following describes the transition process for the containment spray system from the normal injection flowpath to the recirculation flowpath?

- a. At the RWST LO-LO Level elarm the operator manually realigns the flowpath.
- b. At the RWST LO-LO Level alarm the flowpath is automatically realigned.
- c. At 9% RWST level the operator manually realigns the flowpath.
- d. AT 9% RWST level the flowpath is automatically realigned.

QUESTION: 014 (1.00)

The plant is operating at a steady state power level of 85%. Which one of the following events will initially cause the steam generator (SG) main feedwater regulating valve to modulate open?

- a. narrow range SG level transmitter fails high
- b. SG feedwater flow transmitter fails high
- c. SG pressure transmitter fails low
- d. SG steam flow transmitter fails high

QUESTION: 015 (1.00)

Which one of the following conditions will cause an automatic start of the turbine driven auxiliary feed pump?

- a. SI signal
- b. Lo-Lo S/G level in 1/4 S/G's
- c. both main feedwater pumps trip
- d. loss of offsite power

QUESTION: 016 (1.00)

Which one of the following correctly fills in the blank?

The 125 VDC system vital batteries are designed to last _____ at full load.

- a. 2.75 hours
- b. 27.5 hours
- c. 2750 ampere-hours
- d. 27500 ampere-hours

QUESTION: 017 (1.00)

Which one of the following describes the flowpath for relief of an overpressure condition in Gas Decay Tank (GDT) #1?

- a. The GDT #1 relief valve discharges directly to the plant vent system DOWNSTREAM of RV-0014 (trip valve for RE-0014)
- b. The GDT #1 relief valve discharges directly to the plant vent system UPSTREAM of RV-0014 (trip valve for RE-0014)
- c. The GDT #1 relief valve discharges to GDT #10, and the GDT #10 relief valve discharges directly to the plant vent system DOWNSTREAM of RV-0014 (trip valve for RE-0014)
- d. The GDT #1 relief valve discharges to GDT #10, and the GDT #10 relief valve discharges directly to the plant vent system UPSTREAM of RV-0014 (trip valve for RE-0014)

QUESTION: 018 (1.00)

According to Technical Specifications which one of the following conditions by itself would require that all additions of waste gases to the gaseous waste processing system be suspended?

- a. The combined radioactivity level in all of the gas decay tanks exceeds 100,000 curies of noble gases (considered as Xe-133 equivalent)
- b. Waste gas inlet rediction monitor RE-0013 is INOPERABLE
- c. The concentration of hydrogen exceeds 4% by volume in the system
- d. The concentration of oxygen and hydrogen exceed 4% by volume in the system

QUESTION: 019 (1.00)

Concerning the operation of the Containment Low Range radiation conitor (1/2-RE-0002 or 1/2-RE-0003), which one of the following accions will, with no other action, initiate a containment ventilation isolation?

- a. Resetting the Data Processing Module from the communications console
- Loss of power to the Digital Radiation Monitoring System minicomputer
- c. Calibration with the Data Processing Module in "BYPASS"
- d. Loss of power to the Radiation Monitor

QUESTION: 020 (1.00)

Which one of the following is the basis for the Technical Specification limit on hat-up rate?

- a. to prevent brittle fracture of the reactor vessel
- b. to prevent pressurized thermal shock
- c. to prevent departure from nucleate boiling
- d. to prevent overheating of the fuel

QUESTION: 021 (1.00)

The plant is operating at 60% power when loop 3 delta T indication decreases and loop 3 Tavg indication increases. Which one of the following is the most probable cause for these indications?

- a. Thot failed high
- b. Thot failed w
- c. Toold failed high
- d. Toold failed low

QUESTION: 022 (1.00)

Which one of the following actions to terminate cold leg injection and initiate cold leg recirculation occurs automatically after an SI actuation?

- a. SI pump miniflow isolation valves 8813, 8814, and 8920 close
- b. sump suction isolation valves 8811A and 8811B open
- CCP/SI suction cross connect valves 8807A, 8807B, and HV-8924 open
- d. RHR to CCP and SI pump suction isolation valves 8804A and 8804B open

QUESTION: 023 (1.00)

Which one of the following ECCS valves does NOT have a power lockout feature?

- a. SI pump suction from RW-1 (HV8806)
- b. RHR pump suction from RWST (HV8812A/HV8812B)
- c. SI pump miniflow isolation (HV8813)
- d. RHR pump hot leg injection (HV8840)

QUESTION: 024 (1.00)

Which one of the following is the expected plant response if pressurizer pressure transmitter PT-456 fails high with the pressurizer pressure channel selector switch selected to the 457/456 position?

- a. high pressure alarm will annunciate but pressure will be maintained in the control band by PT-457
- b. PORV 456 will open
- c. spray valves will modulate open
- d. control heaters will cycle full off

QUESTION: 025 (1.00)

Which one of the following explains why pressurizer level is programmed with reactor power?

- a. Programming allows use of a level transmitter with an output that is indirectly proportional to the differential pressure measured.
- b. Programming allows use of either the PDP or CCP for changing the pressurizer level.
- c. Programming allows for a constant RCS mass with changing power and a relatively simple charging and letdown system with less expensive and simple control systems.
- d. Programming allows for a changing RCS mass with changing power to ensure sufficient pressurizer volume during transients.

QUESTION: 026 (1.00)

Which one of the following separate events will cause the overtemperature delta T trip setpoint a decrease? Assume initially at 100% power, all control systems in automatic except control rods which are in manual.

- a. auctioneered high Tavg unit fails low
- D. N42 power range lower datector fails low
- c. controlling pressurizer pressure channel fails high
- d. power reduction to 50% with rormal pressure and temperature

QUESTION: 027 (1.00)

Which one of the following reactor trips is unblocked by the P-7 permissive?

- a. source range high flux trip
- b. pressurizer high pressure trip
- c. single loop loss of flow trip
- d. two loop loss of flow trip

QUESTION: 028 (1.00)

According to Emergency Ope ating Procedure FR-Z.1 "Response to High Containment Pressure", the hydrogen recombiners should not be placed in service above which one of the following hydrogen concentrations?

- a. 0.54
- b. 2.0%
- c. 4.0%
- d. 6.0%

QUESTION: 029 (1.00)

Which one of the following describes the purpose of the containment 24 inch purge system?

- a. purge used prior to and during refueling/outages to keep airborne radiation levels low
- purge used during power operations to keep containment pressure in specification or reduce airborne activity
- purge used to prevent hydrogen build up in the reactor cavity following a LOCA
- d. purge used as a backup to the hydrogen recombiners following a LOCA

QUESTION: 030 (1.00)

Which one of the following is used as the normal makeu, water supply for the Spent Fuel Pool?

- a. refueling water storage tank
- b. reactor makeup water storage tank
- c. boron recycle system holdup tank
- d. demineralized water

QUESTION: 031 (1.00)

Bypass switches on the Fuel Transfer System should only be operated under the direct supervision of which one of the following individuals?

- a. Outage Area Supervisor
- b. Operations Superintendent
- c. On Duty Shift Supervisor
- d. Reactor Engineer

QUESTION: 032 (1.00)

While at 100% power, a steam generator safety valve fails full open. Which one of the following is the expected increase in reactor power, assuming no automatic reactor protective or control action occurs?

- a. 24
- b. 48
- c. 68
- d. 8%

QUESTION: 033 (1.00)

Which one of the following conditions will cause a main steam line isolation while operating at normal pressure and temperature?

- a. low steam line pressure on 1 channel of 2 steam lines
- b. low steam pressure on 2 channels of 1 steam line
- c. high steam pressure rate on 1 channel of 2 steam lines
- d. high steam pressure rate on 2 channels of 1 steam line

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QUESTION: 034 (1.00)

Which one of the following describes the effect that an inverter failure will have on vital(IE) instrument power?

- a. no effect, vital(lE) instrument is normally supplied from 120 VAC
- no effect, vital(lE) instrument power will be automatically supplied from the batteries if an inverter fails
- c. temporary loss, vital(lE) instrument power will be automatically re-energized from 480 VAC via regulated transformers
- d. temporary loss, vital(1E) instrument power can be manually re-energized from 480 VAC via regulated transformers

QUESTION: 035 (1.00)

Which one of the following will result in an automatic trip of the emergency diesel generator after an emergency start?

- a. lube oil temperature at 200 degrees F
- b. crankcase pressure at 3 psi
- c. jacket water pressure at 6 psig
- d. tigine speed at 525 rpm

QUESTION: 036 (1.00)

Which one of the following statements correctly describes the actuation of the Halon 1301 fire protection system?

- a. One detector in alarm in the area of coverage will activate the Halon System.
- b. A local and control room alarm will sound for 1 minute prior to the Halon being discharged.
- c. The Halon System can be remotely activated from the control room.
- d. The Halon System will automatically shut room inlet and outlet HVAC dampers of the protected area.

QUESTION: 037 (1.00)

RHR Train A has been aligned to cooldown the reactor coolant system in accordance with UOP 12006-C "Unit Cooldown to Cold Shutdown", and SOP 13011-1 "Placing the RHRS in service for RCS Cooldown". The desired RCS cooldown rate is established by adjusting the position of which one of the following valves?

- a. CCW inlet valve to RHR heat exchanger A
- b. CCW outlet valve to RHR heat exchanger A
- c. RHR heat exchanger A bypass valve
- d. RHR heat exchanger A outlet isolation valve

QUESTION: 038 (1.00)

The plant is command at 100% power with CCW pumps 1 and 3 supplying system loads. Which one of the following describes the response of the CCW system if a reactor trip and Safety Injection occur?

- a. CCW pumps 2 and 4 will auto start as part of the SI actuation sequence. CCW pumps 1 and 3 will continue to run.
- b. CCW pumps 1 and 3 will be shed from their buses and then the SI actuation sequencer will start CCW pumps 1,2,3,4
- c. CCW pumps 1 and 3 will be shed from their buses and then restarted by the SI actuation sequencer. CCW pumps 2 and 4 will not start.
- d. CCW pumps 1 and 3 will continue to run supplying system loads. CCW pumps 2 and 4 will not start.

QUESTION: 039 (1.00)

Given the following plant conditions:

- reactor power is 100%

- Tavg - Tref deviation is 0 degrees F

- · turbine impulse pressure channel PT-505 fails low
- no operator action is taken

Which one of the following describes the steam dump system response to the given conditions?

- a. bank 1 and 2 valves will receive trip open signals but will not arm
- b. bank 1,2,3 and 4 valves will receive trip open signals but will not arm
- c. steam dumps will arm but will not have an open signal
- d. steam dumps will arm and bank 1,2,3, and 4 valves will trip open

QUESTION: 040 (1.00)

Which one of the following correctly fills in the blanks?

"HEADER PRIORITY" is accomplished by isolating the SERVICE AIR to the turbine building at _____ psig decreasing and isolating the INSTRUMENT AIR to the turbine building at _____ psig decreasing air pressure.

- a. 60, 50
- b. 70, 60
- c. 80, 70
- d. 90, 80

QUESTION: 041 (1.00)

Which one of the following items is NOT an indication of a continuous rod withdrawal?

- a. overpower rod stop
- b. reactor power turbine power mismatch
- c. rod control urgent failure
- d. Tavg deviation

QUESTION: 042 (1.00)

Given the following conditions:

- reactor power 95%

- 2 control rods fall into core as indicated by DRPI and rod bottom lights
- · no automatic reactor trip occurs

Which one of the following statements concerning the given conditions is correct?

- a. reactor power should be reduced to less than 50% for rod retrieval
- b. if the dropped rods are in the same bank they can be retrieved together
- c. if dropped rods are in different banks they should be retrieved alphabetically by bank
- d. the reactor should be manually tripped

QUESTION: 043 (1.00)

During retrieval of a dropped rod, an urgent failure alarm will sound due to the logic circuits sensing which one of the following?

- a. multiplexing failure from the disconnect switches being open
- power cabinet regulation failure due to low lift coil current on the affected cabinet
- c. lack of slave cycler signal for unaffected rods in the bank
- d. lack of lift coil current in the unaffected rods in the bank

QUESTION: 044 (1.00)

Which one of the following is the required action if two control rods do not fully insert on a reactor trip per EOP 19001-C, "ES-0.1; Reactor Trip Response"?

- a. de-energize the control rod drive MG sets
- b. locally trip the control rods
- c. emergency borate 104 ppm
- d. emergency borate 208 ppm

QUESTION: 045 (1.00)

Which one of the following is the correct time/condition for entering EOP 19014-C "ES-1.4 Transfer to Hot Leg Recirculation" following a LOCA on Unit 2?

- a. 16 hours after the LOCA occurred
- b. only if cold leg recirculation flow is lost
- c. 16 hours after cold leg recirculation is established
- d. once the RWST low level alarm is reached

QUESTION: 046 (1.00)

Which one of the following conditions does NOT support or indicate that natural circulation flow is occurring?

- a. RCS subcooling monitor indication greater than 24 degrees F [38 degrees F for adverse containment]
- b. SG pressure increasing
- c. core exit thermocouples stable
- d. RCS cold leg temperature at saturation temperature for SG pressure

QUESTION: 047 (1.00)

The plant is operating in accordance with UOP 12004-C "Power Operation". Power is at 43% and increasing in accordance with the UOP. If RCP 2 trips on overcurrent then which one of the following will occur?

- a. loop 2 temperatures trend towards Thot of the reactor and rods will step in
- b. loop 2 temperatures trend towards Toold of the reactor and rods will step in
- c. the reactor wil flow
- d. the reactor w. lasses on SG lo-lo level

QUESTION: 048 (1.00)

Which one of the following procedures or conditions does NOT require emergency boration?

- a. "Response to Nuclear Power Generation/ATWT" (EOP-19211-1/FR-S.1)
- b. "SOURCE RANGE HI FLUX LEVEL AT SHUTDOWN" annunciator response
- Shutdown margin less than required by Technical Specifications
- d. "Rod Control System Malfunction Uncontrolled Continuous Rod Motion" (AOP-18003-1)

QUESTION: 049 (1.00)

Which one of the following is the time limit for tripping the Reactor following a loss of Auxiliary Component Cooling Water to the RCP's according to AOP 18022-C "Loss of Auxiliary Component Cooling Water"?

- a. 2 minutes
- b. 5 minutes
- c. 10 minutes
- d. 20 minutes

QUESTION: 050 (1.00)

Which one of the following is the primary method of determining RHR leakage into the CCW system?

- a. NSCW differential flow alarms
- b. QPCP multipoint temperature recorders
- c. Auxiliary Building leak detection system
- d. Radiation monitoring

QUESTION: 051 (1.00)

Which one of the following is the reason for ensuring that RCS pressure is less than 2335 psig in step 5 of EOP 19211-C "FR-S.1 Response to Nuclear Power Generation/ATWT"?

- a. Maintaining pressure less than 2335 errures that the PORVs do not lift and prevent the full flow of boric acid from getting into the core.
- b. Maintaining pressure less than 2335 ensures that the infection rate of boric acid into the core is sufficient.
- Maintaining pressure less than 2335 ensures that the PORV's are operating properly to prevent the code safety valves from lifting on an overpressure condition.
- d. Maintaining pressure less than 2335 prevents the PRT rupture disc from bursting due to a PORV lifting.

QUESTION: 052 (1.00)

Which one of the following conditions would cause you to exit EOP 19211-C "FR-S.1 Response to Nuclear Power Generation/ATWT" prior to reaching step 11 "return to procedure and step in effect"?

- a. a red path on Core Cooling occurs
- b. a red path on Heat Sink occurs
- c. reactor power is 7% and IR SUR is negative 0.1 dpm
- d. reactor power is 3% and IR SUR is 0 dpm

QUESTION: 053 (1.00)

Which one of the following parameters correctly discriminates between a steam line rupture inside containment and a small break LOCA?

- a. containment radiation
- b. containment temperature
- c. pressurizer level
- d. RCS pressure

QUESTION: 054 (1.00)

EOP 19100-C "ECA 0.0 Loss of All AC Power" contains a caution before step 16, "Depressurize intact SG to 265 psig", that SG pressure should not be lowered to less than 165 psig. Which one of the following is the reason for this caution?

- a. to prevent voiding in the vessel head
- b. to prevent losing pressurizer level
- to prevent nitrogen from the cold leg accumulators from entering the RCS
- d. to prevent temperature from decreasing to a Pressurized Thermal Shock condition

QUESTION: 055 (1.00)

Immediately following a loss of offsite and onsite power (station blackout), the STA reports the status of Critical Safety Functions as:

Subcriticality - Green
Core Cooling - Orange (go to EOP-19222-1/FR-C.2)
Heat Sink - Red (go to EOP-19231-1/FR-h.1)
Integrity - Green
Containment - Green
Inventory - Yellow (go to EOP-19263-1/FR-I.3)

Which one of the following best describes the correct procedure to use in response to the transient?

- a. "Loss of All AC Power", EOP-19100/ECA-0.0
- b. "Response to Degraded Core Cooling", ECP-1922-1/FR-C.2
- c. "Response to Loss of Secondary Heat Sink", EOP-19231-1/FR-H.1
- d. "Response to Voids in Reactor Vessel", EOP-19263-1/FR-I.3

QUESTION: 056 (1.00)

Given the following conditions:

- reactor power 100%
- containment ventilation isolation actuation
- · fuel handling post accident ventilation actuation
- control room emergency filtration actuation

Which one of the following 120 VAC vital instrument panels has probably been lost?

- a. 1AY2A
- b. 1BY .B
- c. 1CY1A
- d. 1DY1B

QUESTION: 057 (1.00)

Which one of the following correctly describes the Technical Specification limit on the quantity of radioactive material that can be stored in the temporary liquid hold-up tanks?

- a. the quantity of radioactive material contained in EACH outside temporary tank shall be limited to less than or equal to 10 Ci.
- b. the TOTAL quantity of radioactive material contained in ALL outside temporary tanks shall be limited to less than or equal to 10 Ci.
- c. the quantity of radioactive material contained in EACH outside temporary tank shall be limited to less than or equal to 100 Ci.
- d. the TOTAL quantity of radioactive material contained in ALL outside temporary tanks shall be limited to less than or equal to 100 Ci.

QUESTION: 058 (1.00)

Which one of the following fire fighting systems is used to prevent inadvertant flow in safety related areas?

- a. preaction sprinkler system
- b. deluge sprinkler system
- c. seismic dry standpipe system
- d. Halon 1301 system

QUESTION: 059 (1.00)

Which one of the following correctly describes the use of the shutdown panels if control room evacuation becomes necessary due to a fire?

- a. Shutdown Panel A should be used since it is electrically isolated from class 1F circuits in the control room
- b. Shutdown Panel B should be used since it is electrically isolated from class lE circuits in the control room
- c. Shutdown Panel A should be used since it is equipped with a complete fire detection system
- d. Shutdown Panel B should be used since it is equipped with a complete fire detection system

QUESTION: 060 (1.00)

Which one of the following correctly fills in the blanks?

In the event of conditions (non-fire) that require evacuating a normal shift complement from the control room, then the OSOS proceeds to the ______, the Shift Supervisor is stationed at the ______, and the Reactor Operator is stationed at the

a. TSC - ERF terminal, Shutdown Panel A, Shutdown Panel B

b. Shutdown Panel A, TSC - ERF terminal, Shutdown Panel B

c. TSC - ERF terminal, Shutdown Panel B, Shutdown Panel B

d. Shutdown Panel B, TSC - ERF terminal, Shutdown Panel A

QUESTION: 061 (1.00)

Which one of the following conditions describes a loss of Containment Integrity, as defined by Technical Specifications?

- a. both doors on a containment airlock are blocked open for maintenance while in mode 4
- b. the leakage rate of a containment penetration exceeds the limits of Technical Specifications while in mode 5
- c. an outer airlock door is found open while in mode 2
- d. an inner airlock door is left open while performing maintenance in containment while in mode 3

Which one of the following correctly describes the effects of posttransient core voiding on Source Range Detector response?

- Source range level increases proportionally with increasing void fraction.
- Source range level decreases proportionally with increasing void fraction.
- c. Source range level initially decreases as void fraction increases, and then increases when void fraction becomes exceptionally large.
- d. Source range level initially increases as void fraction increases, and then decreases when void fraction becomes exceptionally large.

QUESTION: 063 (1.00)

Which one of the following conditions is a Red Path condition for Core Cooling? RCS Subcroling indicates 20 degress F in all cases and adverse containment conditions do not exist.

# of RCPs running		Core Exit Thermocouple (degrees F)	RVLIS vessel level	
а.	0	1100	60% (full range)	
b.	1	811	42% (dynamic range)	
c.	0	750	37% (full range)	
d.	1	690	29% (dynamic range)	

QUESTION: 064 (1.00)

Given the following plant conditions:

- reactor power 80%
- Gross Failed Fuel Detector Alarm

Which one of the following is the most probable cause of the above alarm?

- a. excess fission product gases in the coolant
- b. crud burst in the RCS
- c. exhaustion of the CVCS mixed bed demineralizers
- d. fuel cladding/element perforation

QUESTION: 065 (1.00)

Step 20 of EOP-19000-C "E-O Reactor Trip or Safety Injection" is to "verify RCS average temperature - stable at or trending to 557 degrees F". Which one of the following is the definition of STABLE as used in this step?

- a. Within or outside the normal control band but responding as expected to a controlled condition.
- b. Temperature steady within 1.5 degrees % of the specified temperature.
- c. Temperature steady within 3 degrees F of the specified temperature.
- d. Within the normal control band responding to automatic or manual controls.

QUESTION: 066 (1.00)

EOP 19000-C "E-O Reactor Trip or Safety Injection" step 8 is to "verify AFW pumps running". AFW flow is not addressed again until step 18 "verify total AFW flow - greater than 570 gpm". Which one of the following correctly describes the control of AFW during the performance of E-O? (adverse containment conditions do not exist)

- a. AFW flow can be throttled less than 570 gpm before reaching step 18 if Narrow range level in any ONE SG is greater than 5%.
- b. AFW flow can be throttled less than 570 gpm before reaching step 18 if Wide range level in any THREE SGs is greater than 25%.
- c. AFW flow should NOT be throttled less than 570 gpm until step 18 and then only if Narrow range level in any ONE SG is greater than 5%.
- d. AFW flow should NOT be throttled less than 570 gpm until step 18 and then only if Wide range level in any THREE SGs is greater than 25%

QUESTION: 067 (1.00)

One PORV block valve is closed because of excessive seat leakage through it's respective PORV. If excessive seat leakage develops in the other PORV, then Technical Specifications would require which one of the following?

- a. at least one PORV be restored to operable status within 1 hour or be in Hot Shutdown within 6 hours.
- b. both PORVs be restored to operable status within 6 hours or be in Hot Standby within the following 6 hours.
- c. both block valves be closed with power removed and be in Hot Standby within 6 hours.
- d. the second PORV be restored to operable status or its associated block valve be closed within 1 hour.

QUESTION: 068 (1.00)

Which one of the following accidents is the highest concern for a Pressurized Thermal Shock event?

- a. Large break LOCA due to its large thermal shock and depressurization
- b. Large break LOCA due to its initial cooldown from SI followed by a potential heatup if the core becomes uncovered
- Small break LOCA due to its thermal shock combined with a repressurization
- d. Small break LOCA due to its thermal shock occurring over a longer period of time

QUESTION: 069 (1.00)

Given the following conditions:

- normal 100% power plant lineup
- decreasing pressurizer level
- irreasing VCT level
- "RU. __L WATER INJECTION LO FLOW" annunciator
- "REGEN HX LTDN HI TEMP" at nunciator

Which one of the following would be the most likely cause of the given conditions?

- a. pressurizer PORV open
- b. small break LOCA
- c. letdown isolation
- d. loss of charging

QUESTION: 070 (1.00)

Given the following conditions:

- reactor is in mode 4
- core thermocouple reading 250 degrees F
- RCS is intact
- SGs are available
- reactor is on RHR cooling

If RHR cooling is lost and attempts to restore it fail, then the RCS temperature should be maintained by which one of the following methods according to AOP-18019 "Loss of Residual Heat Removal"

- a. maintaining pressurizer level greater than 9% with the CCP
- b. using SG AFW feed with SG blowdown bleed
- c. using SG ARVs
- d. opening SI accumulator discharge MOVs

QUESTION: 071 (1.00)

Which one of the following actions must be taken if the Technical Specification Safety Limit for reactor coolant system pressure is exceeded? (Assure Mode 1)

- a. reduce RCS pressure to within limits within 5 minutes and be in Hot Standby within 6 hours
- b. reduce RCS pressure to within limits within 30 minutes and be in Hot Standby within 1 hour
- reduce RCS pressure to within limits and be in Hot Standby within 1 hour
- d. reduce RCS pressure to within limits within 1 hour and be in Hot Standby within 6 hours

QUESTION: 072 (1.00)

Given the following conditions:

- reactor startup in progress
- power level is 3%
- IR channel N35 fails low
- no reactor trip occurs

Which one of the following actions is required for the above conditions?

- a. no action is required and the startup may continue since power is above 1%
- suspend all operations involving positive reactivity changes
- reduce power and maintain it below P-6 until the channel is repaired
- d. restore the inoperable channel prior to exceeding 10% power

QUESTION: 073 (1.00)

Which one of the following is the basis for the Technical Specification limit on total steam generator tube leakage of 1 gpm for all steam generators?

- a. To ensure that the dosage contribution from the tube leakage will be limited to a small fraction of 10 CFR 100 dose guideline values in the event of either a steam generator tube rupture or steam line break.
- b. To ensure that the steam generator tube integrity is maintained in the event of a main steam line rupture or under LOCA conditions.
- c. A limited amount of leakage is expected and this threshold value is sufficiently low to ensure early detection of additional leakage.
- d. This is a known source which can be readily detected by radiation monitors on steam generator blowdown so it will not interfere with detection of leakage from other sources.

QUESTION: 074 (1.00)

Following a steam generator tube rupture event the RCS is cooled down, in accordance with EOP-19030-C "E-3 Steam Generator Tube Rupture", to which one of the following temperatures?

- a. 350 degrees F to prevent reaching an Orange Path condition on the Integrity Status Tree
- b. 260 degress F to prevent reaching an Orange Path condition on the Integrity Status Tree
- temperature corresponding to 44 degrees subcooling for the ruptured SG pressure
- d. temperature equal to saturation temperature for the ruptured SG pressure

QUESTION: 075 (1.00)

Which one of the following is the reason that EOF-19031-C "ES-3.1 Post-SGTR Cooldown Using Backfill" is the preferred method for Post-SGTR Cooldown?

- a. radiclogical releases are minimized
- b. Boron dilution is minimized
- c. adverse secondary system chemistry con rns are eliminated
- d. it's the most rapid means of cooling down the RCS

QUESTION: 076 (1.00)

You have transitioned to EOP-19231-C "FR-H.1 Response to Loss of Secondary Heat Sink" in response to a Red Path condition on the Heat Sink CSFST. Which one of the following conditions requires tripping of all RCPs and immediate initiation of bleed and feed? (Assume normal containment conditions)

- a. Wide range level in 2 SGs is off scale low
- b. Wide range level in al. SGs is less than 25% and a motor driven ATW pump has just been started
- c. Wide range level in 3 SGs is less than 25% with no feedwater established
- d. Wide range level in all SGs is less than 40% with no feedwater established

QUESTION: 077 (1.00)

Loss of which one of the following busses will result in a main steamline iso: ation and main feedline isolation?

- a. LAYIA
- b. 18D1
- c. 1CY1A
- d. 1DD1

QUESTION: 078 (1.00)

A Gaseous Radwaste System release is in progress. Which one of the following malfunctions could result in a release above the limits?

- a. RE-13 fails low
- b. RE-14 fails high
- c. RE-14 fails low
- d. loss of power to RV-0014

QUESTION: 079 (1.00)

If refueling operations were in progress on Unit 2, which one of the following radiation monitor alarms would require containment evacuation if a valid high radiation alarm was received?

- a. Containment Personnel Access Hatch Area Monitor, 2-RE-004
- b. Containment Vent Particulate Monitor, 2-RE-2565A
- c. Containment Seal Table Room Area Monitor, 2-RE-0011
- d. Fuel Handling Building Area Monitor, 2-RE-0008

QUESTION: 080 (1.00)

tachment B to EOP-19001-C "ES-0.1 Reactor Trip Response" gives the valve lineup for establishing letdown flow WITHOUT instrument air. Which one of the following is the letdown flowpath established by this procedure?

- a. normal letdown flowpath is used but valves must be manually operated and their positions verified
- normal excess letdown flowpath is used but valves must be manually operated and their positions verified
- c. letdown flow is established from the reactor vessel head vents to the excess letdown flowpath upstream of the excess letdown heat exchanger
- d. letdown flow is established from the reactor vessel head vents to the PRT

QUESTION: 081 (1.00)

Unit 1 is operating at 96% power in accordance with VEGP 12004-C "Power Operation". If the following indications are observed:

- reduced charging flow

- pressurizer backup heaters on

- pressurizer pressure channel selector switch in the normal position (455/456)

 pressurizer level control selector switch in the normal position (459/460)

then actual pressurizer level will decrease if which one of the following has occurred?

- a. LT-459 has failed low
- b. LT-459 has failed high
- c. LT-460 has failed low
- d. LT-460 has failed high

QUESTION: 082 (1.00)

A reactor shutdown is conducted in preparation for a refueling outage. If the reactor goes subcritical at 2 pm on a Sunday then, according to Technical Specifications, which one of the following is the earliest that fuel could be moved from the reactor?

- a. 2 am on Tuesday
- b. 4 pm on Tuesday
- c. 2 pm on Wednesday
- d. 6 pm on Thursday

QUESTION: 083 (1.00)

Which one of the following describes the sequencer operation if an SI actuation occurs while the sequencer is sequencing on under voltage loads?

- a. Sequencer resets to SI mode after the U/V sequencer times out and then SI loads will sequence on as required
- b. Sequencer resets to SI mode immediately and SI loads will sequence on as required
- c. Sequencer will reset to SI mode after load shed is completed and then SI loads will sequence on as required
- d. U/V signal will lock out the SI signal and no SI loads will sequence on

QUESTION: 084 (1.00)

Which one of the following correctly describes how an independent verification of position for a manually operated THROTTLE valve is performed?

- a. Move the valve slightly in the closed direction and then return it to its required position.
- b. Completely close the valve and then reopen it to the required position.
- c. Inspect the "st valve lineup sheet for verification signature an compare recorded valve position with the required position.
- d. Compare visual observation of stem or indicator position with the required position.

OUESTION: 085 (1.00)

You are the Cn-Shift Operations Supervisor (OSOS) at 0230 on a Sunday morning. The Unit 1 Shift Supervisor has determined that a clearance is required to be released on a system but a subclearance has not been released and the subclearance holder is not on site. You can release the subclearance provided that (Select One):

- a. the subclearance holder gives you or his department supervisor permission by phone.
- b. the subclearance holder's foreman gives permission and will be responsible for notifying him.
- c. you and the responsible on-site foreman concur and will be responsible for notifying the subclearance holder.
- d. you and the Unit 1 Shift Supervisor determine that the reason for the subclearance is no longer valid.

QUESTION: 086 (1.00)

Given the following conditions:

- general area dose rate is 50 mr/hour

- localized contact reading on valve "A" is 275 mr/hour

which one of the following would be the proper posting of the area described above?

- a. Radiation Controlled Area with valve "A" marked as a Hot Spot
- b. Radiation Arec
- c. Radiation Area with valve "A" marked as a Hot Spot
- d. High Radiation Area

QUESTION: 087 (1.00)

Which one of the following is the Georgia Power Company whole body exposure limit for radiation workers?

- a. 1.25 Rem/quarter
- b. 3.75 Rem/quarter
- c. 5.0 Rem/year
- d. 5(N-18) Rem/year

QUESTION: 088 (1.00)

Which one of the following is the color of the key tag on the key normally used to open a Locked High Radiation Area?

- a. yellow
- b. yellow with a magenta dot
- c. red
- d. red with a yellow dot

QUESTION: 089 (1.00)

You are the Unit 1 Shift Supervisor. The RO reports that the "A" centrifugal charging pump is running but its relay target is showing. You should (Select One):

- a. request permission to reset the relay target from the OSOS
- b. request electrical maintenance to tag out "A" CCP
- c. authorize resetting the relay target
- d. authorize resetting the relay target after consulting with the Engineering Support Superintendent

QUESTION: 090 (1.00)

Which one of the following actions is required if a sprinkler system becomes inoperable?

- a. unisolate the dry seismic standpipe in the affected area
- b. establish an hourly fire patrol to monitor the affected space
- c. rig a fire hose to the affected space
- d. stage additional portable fire fighting equipment in the affected space

QUESTION: 091 (1.00)

Which one of the following correctly fills in the blanks?

Interim approval for temporary changes to approved VEGP procedures is given by the _____ and is valid for no more than _____.

- a. OSOS , 7 days
- b. OSOS , 14 days
- c. Duty Manager , 7 days
- d. Duty Manager , 14 days

QUESTION: 092 (1.00)

Reverification of initial conditions is required in which one of the following cases?

- a. once each shift for evolutions lasting more than one shift
- b. daily for evolutions lasting more than one day
- c. if the evolution is suspended for more than one shift
- d. if the evolution is suspended for more than 24 hours

C"ESTION: 093 (1.00)

Which one of the following is the minimum shift manning requirements with both units in Mode 1?

	osos	SRO	RO	NLO
a.	1	1	3	3
ъ.	1	1	4	2
c.	1	2	3	3
d.	1	3	4	5

QUESTION: 094 (1.00)

The OSOS shall notify the Manager Operations or Duty Manager if which one of the following occurs?

- a. unscheduled entry into an LCO action statement with a seven day restoration time
- b. completion of an LCO action statement
- c. System Operator requests a generator load change
- d. conditions that require the use of Abnormal Operating Procedures

QUESTION: 095 (1.00)

Which one of the following is a required entry in the Shift Supervisor log?

- a. out-of-specification chemistry results
- start and stop times for all releases of radioactive effluents
- c. performance of minor surveillance testing
- d. name and position of each person on shift

QUESTION: 036 (1.00)

Records indicate that a monthly surveillance on an ESF actuation system instrument was performed on August 10, September 10, and October 8. Which one of the dates listed below is the latest date on which the surveillance can be performed without exceeding the periodicity required by Technical Specifications? (Note: August has 31 days, September has 30 days, October has 31 days)

- a. November 7
- b. November 8
- c. November 15
- d. November 18

QUESTION: 097 (1.00)

P&ID's used for operations should be (Select One):

- a. printed on pink paper and verified no sooner than 1 day prior to usage.
- printed on pink paper and reverified daily when a job is in progress.
- printed on yellow paper and verified no sooner than 1 day prior to usage.
- d. printed on yellow paper and reverified daily when a job is in progress.

QUESTION: 098 (1.00)

Which one of the following statements correctly describes the use of the plant computer for monitoring CSFSTs?

- a. If SPDS is operable, CSFSTs may be checked using SPDS exclusively.
- b. If SPDS is operable, CSFSTs may be checked using SPDS but Red Path conditions must be verified manually.
- c. If one status tree is inoperable on SPDS then all status trees must be monitored manually.
- d. SPDS CSF status indicating lights are only required to be displayed when the EOPs are in effect.

QUESTION: 099 (1.00)

Which one of the following correctly fills in the blanks?

Initial notification of the NRC shall be accomplished within minutes of the declaration of an emergency.

- a. 5
- b. 15
- c. 30
- d. 60

QUESTION: 100 (1.00)

Which one of the following Emergency Director responsibilities CANNOT be delegated?

- a. Directing the notification and actuation of the emergency organization; including emergency response facility activation.
- b. Coordinating and directing VEGP emergency operations.
- c. Recommending protective actions to offsite authorities.
- d. Modifying emergency plan implementing procedures and adjusting emergency response organization staffing.

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

ANSWER: 001 (1.00)

c.

REFERENCE:

LO-LP-27101-11-C LO-9,10 KA:001000K105 (4.4)

001000K105 ..(KA's)

ANSWER: 002 (1.00)

b.

REFERENCE:

LO-LP-28101-06-C LO-3 KA: C01600K603 (4.2)

001000K603 ..(KA's)

ANSWER: 003 (1.00)

b.

REFERENCE:

LO-LP-16401-07 SOP 13003-1

KA: 003000A201 (3.9)

003000A201 ..(KA's)

ANSWER: 004 (1.00)

d.

SOP 13003-1

KA:003000A202 (3.9)

003000A202 .. (KA's)

ANSWER: 005 (1.00)

d.

REFERENCE:

LO-LP-09001-004 LO-4 b. KA: 004000K405 (3.2)

004000K405 ... (KA's)

ANSWER: 006 (1.00)

b.

REFERENCE:

LO-LP-09101-05 LO-3j Simulator Malfunction #81 KA: 004000K106(3.1)

004000K106 ..(KA's)

ANSWER: 007 (1.00)

d.

REFERENCE:

LO-LP-28103-09-C LO-3h

KA: 013000A301 (3.9), 013000K101 (4.4)

013000A301 ..(KA's)

ANSWER: 008 (1.00)

d.

REFERENCE:

LO-LP-28103-09-C LO-6 KA: 013000K401 (4.3)

013000K401 ..(KA's)

ANSWEK: 009 (1.00)

d.

REFERENCE:

LO-LP-27102-07 LO-9 KA: 01400G010 (3.1)

014000G010 ..(KA's)

ANSWER: 010 (1.00)

d.

REFERENCE:

LO-LP-27201-04 LO-7 KA: 014000G008 (3.1)

014000G008 ..(KA's)

ANSWER: 011 (1.00)

a.

LO-LP-17201-06-C LO-8

KA: 015000K502(2.9), 015000K407(3.8)

015000K407 ..(KA's)

ANSWER: 012 (1.00)

Ъ.

REFERENCE:

LO-LP-29130-03 LO-2 KA: 022000A301 (4.3)

022000A301 ..(KA's)

ANSWER: 013 (1.00)

C.

REFERENCE:

LO-LP-15101-04 LO-8 KA: 026000K401 (4.3)

026000K401 ..(KA's)

ANSWER: 014 (1.00)

d.

REFERENCE:

LO-LP-18501-06-C LO-10 Simulator Malfunction #87,90,93,148

KA: 059000K104 (3.4)

059000K104 ..(KA's)

ANSWER: 015 (1.00)

d.

LO-LP-20101-11-C LO-8 KA: 061000K402 (4.6)

061000K402 ..(KA's)

ANSWER: 016 (1.00)

a.

REFERENCE:

LO-LP-01201-07-C LO-4 KA: 063000A101 (3.3)

063000A101 ..(KA's)

ANSWER: 017 (1.00)

C.

REFERENCE:

LO-1P-46101-06 LO-5 KA: 071000A209 (3.5)

071000A209 ..(KA's)

ANSWER: 018 (1.00)

d.

REFERENCE:

LO-LP-46101-06 LO-13 T. S. 3.11.2.5

KA: 071000G005 (3.1)

· 071000G005 ..(KA's)

ANSWER: 019 (1.00)

d.

LO-LP-32101-10-C

KA: 072000K401 (3.6)

072000K401 ..(KA's)

ANSWER: 020 (1.30)

a.

REFERENCE:

LO-LP-16001-06 LO-7d KA: 002000G006 (3.8)

002000G006 ..(KA's)

ANSWER: 021 (1.00)

c.

REFERENCE:

LO-LP-16101-03 LO-8 KA: 002020K509 (3.9)

002020K509 ..(KA's)

ANSWER: 022 (1.00)

b.

REFERENCE:

LO-LF-13301-04-C LO-4 KA: 006020A304 (4.3)

006020A304 ..(KA's)

ANSWER: 023 (1.00)

b.

LO-LP-123301-04-C LO-7 KA: 006000K410 (3.7)

006000K410 ..(KA's)

ANSWER: 024 (1.00)

b.

: _FERENCE:

LO-LP-16303-07-C LO-3 Simulator Malfunction #59 KA: 010000A302 (3.5)

010000A302 ..(KA's)

ANSWER: 025 (1.00)

C.

REFERENCE:

LO-LP-16302-04-C LO-1 KA: 011000K512 (3.3)

011000K512 ..(KA's)

ANSWER: 026 (1.00)

b.

REFERENCE:

LO-LP-28102-04 LO-3

KA:012000K611 (2.9), 012000A101 (3.4)

012000K611 ..(KA's)

ANSWER: 027 (1.00)

d.

REFERENCE:

LO-LP-28102-04

KA: 012000K406 (3.5)

012000K406 ..(KA's)

ANSWER: 028 (1.00)

d.

REFERENCE:

LO-LP-29140-04 LO-2

EOP FR-Z.1 P.8

KA: 028000K501 (3.9)

028000K501 ..(KA's)

ANSWER: 029 (1.00)

a.

REFERENCE:

LO-LP-29101-06 LO-1

KA: 029000G004 (3.0)

029000G004 ..(KA's)

ANSWER: 030 (1.00)

. d.

LO-LP-25102-07-C LO-8 KA: 033000A203 (3.5)

033000A203 .. (KA's)

ANSWER: 031 (1.00)

a.

REFERENCE:

LO-LP-25101-07-C LO-6c VEGF 93260-C p.4

KA: 034000G002 (3.1)

034000G002 ..(KA's)

ANSWER: 032 (1.00)

C.

REFERENCE:

LO-LP-21102-09-C LO-18 KA: 0350010K602 (3.5)

035010K602 ..(KA's)

ANSWER: 033 (1.00)

b.

REFERENCE:

LO-LP-21102-09-C

KA: 039000K405 (3.7)

039000K405 ..(KA's)

ANSWER: 034 (1.00)

d.

LO-LP-01001-02 LO-8 KA: 062000K410 (3.5)

062000K410 ..(KA's)

ANSWER: 035 (1.00)

d.

REFERENCE:

LO-LP-11201-06-C LO-5 KA: 064000K402 (4.2)

064000K402 ..(KA's)

ANSWER: 036 (1.00)

d

REFERENCE:

LO-LP-43101-05-C LO-7,8 KA: 086000K405 (3.4)

086000K405 ..(KA's)

ANSWER: 037 (1.00)

d.

REFERENCE:

LO-LP-12101-20-C LO-6 SOP 13011-1 p.8 UOP 12006-C

KA: 005000A101 (3.6)

005000A101 ..(KA's)

ANSWER: 038 (1.00)

A.

REFERENCE:

LO-LP-10101-06 LO-10 KA: 008030A304 (3.7)

008030A304 ..(KA's)

ANSWER: 039 (1.00)

b.

REFERENCE:

LO-LP-21201-11 LO-10

Steam Dump Control System Text p.12b-13

KA: 041000G007 (3.0)

041000G007 ..(KA's)

ANSWER: 040 (1.00)

c.

REFERENCE:

LO-LP-02110-07-C LO-4 KA: 078000K402 (3.5)

078000K402 ..(KA's)

ANSWER: 041 (2.00)

c.

LO-LP-J0303-06-C LO-9 KA: 000001A205 (4.6)

000001A205 ..(KA's)

ANSWER: 042 (1.00)

d

REFERENCE:

AOP 18003-C p.3

KA: 000003K304 (4.1)

000003K304 ..(KA's)

ANSWER: 043 (1.00)

d

REFERENCE:

LO-LP-60303-06-C LO-3 KA: 000003G005 (2.6)

000003G005 ..(KA's)

ANSWER: 044 (1.00)

d

REFERENCE:

LO-LP-37011-05-C p.10

EOP 19001-C p.3

KA: 000005K301 (4.3)

000005K301 ..(KA's)

ANSWER: 045 (1.00)

a

REFERENCE:

LO-LP-37114-03 LO-5 EOP 19010-C p.15 KA: 000011K315 (4.4)

000011K315 ..(KA's)

ANSWER: 046 (1.00)

b

REFERENCE:

EOP 19011-C ATTACHMENT E LO-LP-37011 LO-13 KA: 000011A209 (4.3)

000011A209 ..(KA's)

ANSWER: 047 (1.00)

d

REFERENCE:

LO-LP-60305-03 LO-1 KA: 000015K102 (4.1)

000015K102 ..(KA's)

ANSWER: 048 (1.00)

d

LO-LP-09402-03-C p.17 EOP 19211-C p.3 ARP 17010-1 p.18 T.S. 3.1.1.1, 3.1.1.2 KA: 000024K301 (4.4)

000024K301 ..(KA's)

ANSWER: 049 (1.00)

.

REFERENCE:

AOP 18022-C p.4

KA: 000026K303 (4.2), 000026A206 (3.1)

000026K303 ..(KA's)

ANSWER: 050 (1.00)

d

REFERENCE:

LO-LP-10101-06 LO-8 CCW TEXT p.100-14 KA: 000026A201 (3.5)

000026A201 ..(KA's)

ANSWER: 051 (1.00)

b

REFERENCE:

EOP-19211-C STEP 5 ERG FR-S.1 STEP 4 KA: 000029K312 (4.7)

000029K312 ..(KA's)

ANSWER: 052 (1.00)

d

REFERENCE:

LO-LP-37041-05-C LO-9 KA: 029000G010 (4.5)

000029G010 ..(KA's)

ANSWER: 053 (1.00)

a

REFERENCE:

LO-LP-3711-05-C LO-5 LO-LP-37121-06-C LO-6 KA: 000040A203 (4.7)

000040A203 ..(KA's)

ANSWER: 054 (1.00)

C

REFERENCE:

EOP 19100-C p.12 LO-LP-37031-06-C LO-9 KA: 000055K302 (4.6)

000055K302 ..(KA's)

ANSWER: 055 (1.00)

a

LO-LP-37031-06-C p.5

EOP-19100-C p.2

KA: 000055G011 (4.1)

000055G011 .. (KA's)

ANSWER: 056 (1.00)

a

REFERENCE:

LO-LP-01103-07-C p.12

LO-LP-60324-02-C

AOP 18032-1 p.10

KA: 000057A219 (4.3)

000057A219 ..(KA's)

ANSWER: 057 (1.00)

a

REFERENCE:

LO-LP-39215-03 LO-1

T.S. 3.11.1.4

KA: 000059G003 (3.8)

000059G003 ..(KA's)

ANSWER: 058 (1.00)

a

REFERENCE:

LO-LP-43101-05-C LO-11

KA: 000067A216 (4.0)

000067A216 ..(KA's)

ANSWER: 059 (1.00)

b

REFA ICE:

LO-LP-60327-01-C LO-1

AOP 18038-1 p.4

KA: 000068K201 (4.0)

000068K201 ..(KA's)

ANSWER: 060 (1.00)

c

REFERENCE:

AOP 18038 p.4

KA: 000068K318 (4.5)

000068K318 ..(KA's)

ANSWER: 061 (1.00)

a

REFERENCE:

T.S. 3.6.1.2, 3.6.1.3, Definition 1.7

KA: 000069A201 (4.3)

000069A201 ..(KA's)

ANSWER: 062 (1.00)

d

LO-LP-36103-03-C LO-2 KA: 000074K102 (4.8)

000074K102 ..(KA's)

ANSWER: 063 (1.00)

C

REFERENCE:

LO-LP-37061-05 LO-5 EOP 19200 p.5 KA: 000074G011 (4.6)

000074G011 ..(KA's)

ANSWER: 064 (1.00)

d

REFERENCE:

ARP 17005-1 p.21 LO-LP-64202-03 p.8 KA: 000076K306 (3.8)

000076K306 ..(KA's)

ANSWER: 065 (1.00)

a

REFERENCE:

EOP-19000-C STEP 20 LO-LP-37011-05-C LO-7 KA: 000007K301 (4.6)

000007K301 ..(KA's)

ANSWER: 066 (1.00)

REFERENCE:

LO-LP-37011-05-C LO-8

EOP 19231, p.8

KA: 000007A108 (4.3), 000007G010(4.1)

000007A108 ..(KA's)

ANSWER: 067 (1.00)

d

REFERENCE:

LO-LP-39208-05-C p.11

T.S. 3.4.4

KA: 000008G008 (3.6)

000008G008 ..(KA's)

ANSWER: 068 (1.00)

REFERENCE:

LO-LP-37111-05-C LO-4

KA: 000009K308 (4.1)

000009K308 ..(KA's)

ANSWER: 069 (1.00)

d

LO-LP-60307-03 LO-4 AOP-18007-C p.5 KA: 000022K103 (3.4)

000022K103 ..(KA's)

ANSWER: 070 (1 6)

C

REFERENCE:

AOP-18019-C STEP A.12 KA: 000025K101 (4.3)

000025K101 ..(KA's)

ANSWER: 071 (1.00)

c

REFERENCE:

T.S. 2.1.2 LO-LP-39203-04

KA: 000027G003 (3.6)

000027G003 ..(KA's)

ANSWER: 072 (1.00)

b

REFERENCE:

LO-LP-60302-02 LO-9 AOP 18002-C p.4 KA: 000033K302 (3.9)

000033K302 ..(KA's)

ANSWER: 073 (1.00)

a

REFERENCE:

T.S. 3.4.6.2 BASIS LO-LP-39208-05-C p.14 KA: 000037K307 (4.4)

000037K307 ..(KA's)

ANSWER: 074 (1.00)

C

REFERENCE:

EOP-19030-C STEP 14 LO-LP-37311-07-C LO-5 WOG ERG E-3 p.85 KA: 000038A215 (4.4)

000038A215 ..(KA's)

ANSWER: 075 (1.00)

a

REFERENCE:

LO-LP-37311-07-C EOP-19030-C p.30 KA:000038K306 (4.5)

000038K306 ..(KA's)

ANSWER: 076 (1.00)

C

LO-IP-37051-07-C LO-11 KA: 000054K304 (4.6)

000054K304 ..(KA's)

ANSWER: 077 (1.00)

b

REFERENCE:

LO-LP-01201-07-C LO-5 AOP-18034 p.27

KA: 000058A203 (3.9)

000058A203 ..(KA's)

ANSWER: 078 (1.00)

C

REFERENCE:

LO-LP-46101-06 LO-11

KA: 000060A205 (4.5), 000060G008 (3.8)

000060A205 ..(KA's)

ANSWER: 079 (1.00)

b

REFERENCE:

LO-LP-32101-10-C ARP-17100-1, 17102-2 KA: 000061A205 (4.2)

000061A205 ..(KA's)

ANSWER: 080 (1.00)

d

REFERENCE:

EOP-19001-C ATTACHMENT A CVCS TEXT p.5a-8 KA:000065A208 (3.3)

000065A208 .. (KA's)

ANSWER: 081 (1.00)

b

REFERENCE:

LO-LP-60301-03 LO-12 KA: 000028A201 (3.6)

000028A201 ..(KA's)

ANSWER: 082 (1.00)

d

REFERENCE:

LO-LP-25201-09-C LO-7

T.S. 3.9.3

KA: 000036G003 (3.8)

000036G003 ..(KA's)

ANSWER: 083 (1.00)

b

LO-LP-28201-09-C LO-5 KA: 000056A247 (3.9)

000056A247 .. (KA's)

ANSWER: 084 (1.00)

d

REFERENCE:

VEGP 00308-C p.5

KA: 194001K101 (3.7)

194001K101 ..(KA's)

ANSWER: 085 (1.00)

8

REFERENCE:

LO-LP-63304-09-C LO-1 VEGP 00304 p.5 KA:194001K102 (4.1)

194001K102 ...(KA's)

ANSWER: 086 (1.00)

C

REFERENCE:

LO-LP-63930 LO-1 VEGP 00930-C p.2

KA: 194001K103 (3.4)

194001K103 ..(KA's)

ANSWER: 087 (1.00)

C

REFERENCE:

VEGP 00920-C TABLE 1 KA:194001K104 (3.5)

194001K104 .. (KA's)

ANSWER: 088 (1.00)

a

REFERENCE:

LO-LP-63008-07-C LO-1 VEGP 0008-C p.6

KA: 194001K105 (3.4)

194001K105 ..(KA's)

ANSWER: 089 (1.00)

C

REFERENCE:

1.0-LP-6: 307-04 LO-2

VEGP 10007-C

KA: 194001K107 (3.7)

194001K107 ..(KA's)

ANSWER: 090 (1.00)

b

LO-LP-43101-05-C LO-14 KA: 194001K116 (4.2)

194001K116 ..(KA's)

ANSWER: 091 (1.00)

b

REFERENCE:

LO-LP-63502-04 LO-2 VEGP 00052-C p.5 KA: 194001A101 (3.4)

194001A101 ..(KA's)

ANSWER: 092 (1.00)

d

REFERENCE:

LO-LP-63054-06-C LO-3 VEGP 00054-C p.5 KA: 194001A102 (3.9)

194001A102 ..(KA's)

ANSWER: 093 (1.00)

a

REFERENCE:

VEGP 10003-C TABLE 1 T.S. TABLE 6.2.1 KA: 194001A103 (3.4)

194001A103 ..(KA's)

ANSWER: 094 (1.00)

d

REFERENCE:

VEGP 10000-C p.17 KA:194001A105 (3.8)

194001A105 ..(KA's)

ANSWER: 095 (1.00)

d

REFERENCE:

LO-LP-63501-04 LO-1,3 VEGP 10001 p.1

KA: 194001A106 (3.4)

194001A106 ..(KA's)

ANSWER: 096 (1.00)

c

REFERENCE:

T.S. 4.0

KA: 194001A106 (3.4)

194001A106 ..(KA's)

ANSWER: 097 (1.00)

c

LO-LP-55101-03 LO-16 KA: 194001A107 (3.2)

194001A107 ..(KA's)

ANSWER: 098 (1.00)

a

REFERENCE:

LO-LP-37002-05-C LO-9 LO-LP-05210-08-C p.3 PA: 194001A115 (3.4

194001A115 ..(KA's)

ANSWER: 099 (1.0.)

d

REFERENCE:

VEGP 91002-C p.3 KA: 194001A116 (4.4)

194001A116 ..(KA's)

ANSWER: 100 (1.00)

C

REFERENCE:

VEGP 91102-C p.2 KA: 194001A116 (4.4) 194001A116 ..(KA's)

Multiple Choice (Circle or X your choice)

001	а	b	c	d	
002	a	ь	c	d	
003	a	ь	c	d	
004	a	ь	c	d	
005	a	ь	c	d	
006	а	ь	c	d	
007	а	ь	c	d	
300	а	ь	c	d	
009	a	ь	c	d	
010	a	ь	c	d	
011	а	ь	c	d	
012	a	b	c	d	
013	a	b	c	d	
014	a	ь	c	d	
015	a	ь	c	d	
015	a	ь	c	d	
01/	а	ь	c	d	
018	а	b	c	d	
019	a	b	c	d	
020	a	ь	c	d	
021	а	b	c	d	
022	a	b	c	d	
023	a	ь	c	d	
024	а	ь	c	d	
025	a	ь	c	d	

Multiple Choice (Circle or X your choice)

026	a	b	0	d	
027	a	ь	c	d	
028	a	ь	c	d	
029	a	ь	c	d	
030	a	ь	c	d	
031	a	ь	c	d	
032	a	ь	c	d	
033	a	ь	c	d	
034	a	ь	c	d	
035	а	ь	c	d	
U36	а	ь	c	d	
037	a	ь	c	d	
038	a	ь	c	d	
039	a	ь	c	d	
040	а	ь	c	d	
041	а	ь	c	d	
042	a	ь	c	d	
043	а	ь	с	d	
044	a	h	c	d	
045	а	ь	c	d	
046	а	ь	c	d	
047	a	ь	c	d	
048	a	ь	c	d	
049	а	ь	c	d	
050	a	ь	c	d	

Multiple Choice (Circle or X your choice)

051	a	b	c	d	
052		ь	c	d	
053	a	ь	c	d	
054	A	ь	c	d	
055	a	ь	c	d	
056	a	ь	c	d	
057	a	ь	c	d	
058	a	ь	c	d	
059	a	ь	c	d	
060	A	ь	c	d	
061	a	ь	c	d	
062	a	b	c	d	
063	a	ь	c	d	
064	A	ь	c	d	
065	a	ь	c	d	
066	A	ь	c	d	
067	A	ь	c	d	
068	a	ь	c	d	
069	a	ь	c	d	
070	a	ь	c	d	-
071	a	ь	c	d	
072	A	ь	c	d	
073	a	ь	c	d	
074	a	ь	c	d	
075	a	ь	c	d	

Multiple Choice (Circle or X your choice)

076		b	c	d	
077	a	ь	c	d	
078	a	ь	c	d	
079	8	ь	c	d	-
080	a	ь	c	d	
081		b	c	d	
082	a	ь	c	d	
083	A	ь	c	d	
084	a	ь	c	d	
085	a	ь	c	d	
086	a	ь	c	d	
087	a	ъ	c	d	
880	A	ъ	c	d	
089	A	ь	c	d	
090	A	ь	0	d	
091	A	b	c	d	
092	a	b	c	d	
093	a	b	c	d	
094	A	ь	c	d	
095	a	ь	c	d	
096	a	b	c	d	
097	a	ь	c	d	
098	a	ь	c	d	
099	а	b	c	d	
100	a	ь	c	d	-

001 c 002 b 003 b 004 d 005 6 006 b 007 d 008 d 009 d 010 d 011 012 b 013 C 014 d 015 d 016 a 017 C 018 d 019 d 020 021 C 022 b 023 b 024 b

025

C

026	ь
027	d
028	d
029	a
030	d
031	a
032	c
033	b
034	d
035	d
036	d
037	d
038	A
039	ь
040	c
041	c
042	d
043	d
044	d
045	a
046	ь
047	d
048	d
049	c
050	d

051	b
052	d
053	a
054	c
055	a
056	. a

059 b

a

057

058

060 c

061 a

062 d

063 с

064 d

065 a

066

067 d

068 c

069 d

070 c

071 c

072 b

073

074 c

075 a

076	c
077	ь
078	c
079	ь
080	d
081	ь
082	d
083	b
084	d
085	a
086	c
087	c
088	a
089	c
090	ь
091	ь
092	d
093	a
094	d
095	d
096	c
097	c
098	а
099	d
100	c

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

OUESTION	VALUE	REFERENCE
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002	1.00	9000002
003	1.00	9000003
004	1.00	9000004
005	1.00	9000005
006	1.00	9000006
007	1.00	9000007
008	1.00	9000008
009	1.00	9000009
010	1.00	9000010
011	1.00	9000011
012	1.00	9000012
013	1.00	9000013
014	1.00	9000014
015	1.00	9000015
016	1.00	9000016
017	1.00	9000017
018	1.00	9000018
019	1.00	9000019
020	1.00	9000020
021	1.00	9000021
022 023	1.00	9000022
024	1.00	9000024
025	1.00	9000025
026	1.00	9000026
027	1.00	9000027
028	1.00	9000028
029	1.00	9000029
030	1.00	9000030
031	1.00	9000031
032	1.00	9000032
033	1.00	9000033
034	1.00	9000034
035	1.00	9000035
036	1.00	9000036
037	1.00	9000037
038	1.00	9000038
039	1.00	9000039
040	1.00	9000040
041	1.00	9000041
042	1.00	9000042
043	1.00	9000043
044	1.00	9000044
045	1.00	9000045 9000046
046 047	1.00	9000046
047	1.00	9000047
049	1.00	9000049
050	1.00	9000050
051	1.00	9000051
052	1.00	9000052

QUESTION	VALUE	REFERENCE
053	1.00	9000053
054	1.00	9000054
055	1.00	9000055
056	1.00	9000056
057	1.00	9000057
058	1.00	9000058
059	1.00	9000059
060	1.00	9000060
061 062	1.00	9000062
063	1.00	9000063
064	1.00	9000064
065	1.00	9000065
066	1.00	9000066
067	1.00	9000067
068	1.00	9000068
069	1.00	9000069
070	1.00	9000070
071	1.00	9000071
072	1.00	9000072
073	1.00	9000073
074	1.00	9000074
075	1.00	9000075
076	1.00	9000076
077	1.00	9000077
078 079	1.00	9000078
080	1.00	9000080
081	1.00	9000081
082	1.00	9000082
083	1.00	9000083
084	1.00	9000084
085	1.00	9000085
086	1.00	9000086
087	1.00	9000087
088	1.00	9000088
089	1.00	9000089
090	1.00	9000090
091	1.00	9000091
092	1.00	9000092
093	1.00	9000093
094	1.00	9000094
095	1.00	9000095
096 097	1.00	9000096 9000097
098	1.00	9000098
099	1.00	9000099
100	1.00	9000100
	100.00	

100.00

ENCLOSURE 3

SIMULATOR FACILITY REPORT

Facility Licensee:

Georgia Power Company

Facility Docket No.:

50-424 and 50-425

Operating Tests Administered On: June 25-28, 1990

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

ITEM

DESCRIPTION

SPDS

During all scenarios, intermittent negative deviations in RCS subcooling caused numerous momentary computer alarms on the core cooling critical safety function.

Pressurizer Level

During a job performance measure to place RHR in service for shutdown cooling, pressurizer level improperly dropped to zero when the RHR pump was started.