



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

ENCLOSURE 1

EXAMINATION REPORT - 50-424/91-302

Facility Licensee: Georgia Power Company
P. O. Box 1295
Birmingham, AL 35201

Facility Name: Vogtle Electric Generating Plant

Facility Docket Nos.: 50-424 and 50-425

Facility License Nos.: NPF-68 and NPF-81

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

Chief Examiner: James H. Moorman III 1-14-92
James H. Moorman, III Date Signed

Approved By: Lawrence L. Lawyer 1-14-92
Lawrence L. Lawyer, Chief Date Signed
Operator Licensing Section 1
Division of Reactor Safety

SUMMARY

Operating examinations were administered on December 10 - 16, 1991. The written examination was administered on December 17, 1991.

Written examinations and operating tests were administered to two Reactor Operator (RO) applicants and 13 Senior Reactor Operator (SRO) applicants. All applicants passed the examinations.

There were no generic weaknesses noted. Procedure weaknesses identified during the examination are described in paragraph 3 of this report. Senior Operator candidate knowledge deficiencies identified by the written examination are described in paragraph 4 of this report.

REPORT DETAILS

1. Facility employees attending exit meeting:

- H. Beacher, Technical Support
- B. Brown, Operations Training Supervisor
- R. Dorman, Training and Emergency Preparedness Manager
- S. Kitchens, Assistant General Manager - Support
- R. LeGrand, Operations Manager
- C. Meyer, Operations Superintendent

2. Examiners:

- +L. Lawyer, Chief, Operator Licensing Section 1
- *J. Moorman, Senior Examiner, Region II
- G. Harris, Examiner, Region II
- T. Bardell, Examiner, Pacific Northwest Labs
- A. Lopez, Examiner, Pacific Northwest Labs

+Attended exit meeting only

*Chief Examiner

3. Procedure problems noted during exams

Procedure 18003, Rod Control System Malfunction. The note before steps A18 and C20 contain actions to be performed by an operator. Accepted writing guidelines for this type of procedure prohibits notes from containing action steps.

Procedure 18031-C, Loss of Class 1E Electrical Systems. This procedure does not address the fact that, under a normal electrical plant line-up, a feed pump is lost when either of the emergency busses is lost. Loss of a feed pump with the plant at 100 percent power can cause a major plant transient. Additional steps in the procedure could provide the operators with additional guidance to mitigate any adverse consequences.

Procedure 14980, Diesel Generator Monthly Surveillance. The surveillance requires a different line-up of the starting air banks depending on which month the surveillance is run. There are two starting air banks used. One bank is used during the months of January, April, July and October and the other bank is used during the months of February, May, August, and November. Both banks are used during the remaining months but the procedure does not specifically state this. This caused some confusion among the operators during the exams.

4. Knowledge deficiencies identified by the written examination

Results of the Senior Reactor Operator written examination indicated that candidate knowledge was weak in five areas.

- a. The ability to recognize the cause of a "Rod Deviation/Radial Tilt" alarm as asked in question 10 of the examination.
- b. The ability to recognize which reactor trip signal was based on the prevention of departure of nucleate boiling as asked in question 26.
- c. The ability to recognize response of the Nuclear Service Cooling Water System to the loss of a pump as asked in question 40.
- d. The ability to recognize plant response to the failure of a pressurizer level transmitter as asked in question 80.
- e. The ability to recognize the frequency of a continuous fire watch as asked in question 91.

5. Examination material pre-review

The written examination was reviewed at the Vogtle Training Center November 25 - 26, 1991, by members of the Vogtle training staff. All NRC and contractor personnel responsible for development of the examination material were present for the review. There were no post exam comments concerning the written exam made by the Vogtle training staff. The simulator exams were validated at the Vogtle simulation facility November 25, 1991, by NRC examiners and members of the Vogtle training staff. The thoroughness of the exam review performed by the training and operations staff and the cooperation and support provided to help validate the operating tests added greatly to the validity of all portions of the examination.

6. Exit Interview

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

There were no generic weaknesses noted during the exams. However, two individual operators did exhibit weaknesses during the simulator examination that, while very serious, were not justification for failure of the examination.

There is no proprietary material contained in this report.

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

CANDIDATE'S NAME: MASTER - AS GIVEN
FACILITY: Vogtle 1 & 2
REACTOR TYPE: PWR-WEC4
DATE ADMINISTERED: 91/12/17

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.

<u>TEST VALUE</u>	<u>CANDIDATE'S SCORE</u>	<u>%</u>	
<u>100.00</u>			
	<u>FINAL GRADE</u>	<u>%</u>	<u>TOTALS</u>

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

Candidate's Signature

QUESTION: 001 (1.00)

The following plant conditions exist:

- Unit 1 is at 80 percent power.
- Rod control selector is in Auto Rod.
- Control bank D is at 200 steps.
- T-avg is 2 degrees F BELOW T-ref.

WHICH ONE (1) of the following describes the response of the rod control system?

- a. The control rods step IN at 8 steps per minute.
- b. The control rods step OUT at 8 steps per minute.
- c. The control rods step IN at 36 steps per minute.
- d. The control rods step OUT at 36 steps per minute.

ANSWER: 001 (1.00)

b.

REFERENCE:

1. LO-LP-27101-14-C, pp. 9, & 38, LO 9.
2. EQB HNUM 23688, Vogtle 1991-05-31, similar.
3. RO Only.
4. 001000K402 [3.8/3.8]

001000K402 ..(KA's)

QUESTION: 002 (1.00)

WHICH ONE (1) of the following conditions will generate a Rod Control Urgent Failure alarm?

- a. One rod in control bank D dropping.
- b. One rod control motor generator tripping.
- c. One rod group failing to move when demanded.
- d. One +16.5 VDC power supply being interrupted to the slave cyclers.

ANSWER: 002 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-27101-14-C, pp. 26, & 27.
- 2. VEGP LO-LP-27102-09, pg. 9, 12, & 19, LO 6.
- 3. Both RO and SRO.
- 4. 001050K401 [3.4/3.8]

001050K401 ..(KA's)

QUESTION: 07 (1.00)

WHICH ONE (1) of the following states the function of the Master Cycler in the Rod Control Drive System?

- a. Selects the group to be moved.
- b. Controls the overlap of the control banks.
- c. Generates sequence orders for the power cabinets.
- d. Controls the rate at which the banks are stopped.

ANSWER: 003 (1.00)

a.

REFERENCE:

1. VEGP LO-LP-27101-14-1 pg. 37, LO 7.
2. RO only.
3. 001000G007 [3.2/3.3]

001000G007 ..(KA's)

QUESTION: 004 (1.00)

WHICH ONE (1) of the following describes a feature of the Reactor Coolant Pump Power supply run-Class I-E breaker?

- a. It has no closure interlock.
- b. It provides input to the reactor protection system.
- c. It has an 86 lockout relay which is automatically reset.
- d. It is interlocked open when the oil lift pump pressure is less than 60' psig.

ANSWER: 004 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-16401-10 pp. 12, 21, & 22, LO 8.
2. Similar to EQB HNUM 23600, Vogtle 1991-05-30.
3. Both RO and SRO.
4. 003000K201 [3.1/3.1]

003000K201 ..(KA's)

QUESTION: 005 (1.00)

WHICH ONE (1) of the following actions should be performed if the No. 1 seal leakoff to No. 1 Reactor Coolant Pump (RCP) increases to 5.9 gpm?

- a. Increase pressure in the VCT to 30 psig.
- b. Throttle seal injection for No. 1 RCP to 8 gpm.
- c. Shut the No. 1 seal leakoff valve for No. 1 RCP.
- d. Reduce RCS pressure to the range of 2220 and 2235 psig.

ANSWER: 005 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-16401-10 pg. 18
- 2. Both RO and SRO.
- 3. 000015A122 [4.1/4.2]

000015A122 ..(KA's)

QUESTION: 006 (1.00)

WHICH ONE (1) of the following describes the eventual result of VCT level channel LC-112 failing HIGH? Assume all controls are in automatic, and NO operator action is taken.

- a. HIGH VCT level and isolation of makeup from the blender.
- b. LOW VCT level and loss of required NPSH to the charging pumps.
- c. HIGH VCT level and continuous makeup from the blender to the VCT.
- d. LOW VCT level and auto swap over of charging pump suction to the RWST.

ANSWER: 006 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-09410-04-C, LO-TP-09401-002
2. VEGP Text 5a, pg. 5a-37.
3. EQB HNUM 23521, Vogtle 1991-05-30.
4. Both RO and SRO.
5. 004020A305 [3.2/3.0]

004020A305 ..(KA's)

QUESTION: 007 (1.00)

The following plant conditions exist:

- One 75 gpm letdown orifice is in service.
- The 45 gpm letdown orifice is in service.
- No. 1 seal leak off is normal for all reactor coolant pumps.
- One centrifugal charging pump is in service.

WHICH ONE (1) of the following values is the expected charging flow rate required to maintain a steady pressurizer level?

- a. 57 gpm.
- b. 87 gpm.
- c. 120 gpm.
- d. 132 gpm.

ANSWER: 007 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-09001-04 pg. 25, LO 7.
2. VEGP Text 5a, pg. 5a-5.
3. Both RO and SRO.
4. 004020A303 [3.4/3.1]

004020A303 ..(KA's)

QUESTION: 008 (1.00)

The following plant conditions exist:

- Unit 1 is at 75 percent power.
- A xenon transient is in progress.
- Rod control is in Automatic.
- All systems are operating as designed.
- ROD BANK LO LO LIMIT annunciator lit.

WHICH ONE (1) of the following CVC valves is positioned to correct the apparent condition?

- a. Boric acid valve FV-110A fully closed.
- b. Emergency boration valve HV-8104 open.
- c. Solenoid operated valve HV-8439 closed.
- d. Reactor makeup water flow control valve FV-111A fully open.

ANSWER: 008 (1.00)

b.

REFERENCE:

1. VEGP Text 5d, rev. 2, pg. 5d-33, Text 6a, rev.3, pg. 6a-28.
2. VEGP LO-LP-09001-04, pp. 6, 12, & LO-TP-09001-002.
3. VEGP 17010-1, rev. 15, pg. 28.
4. VEGP 13009-1, rev. 8, pg. 10.
5. RO Only.
6. 004000A401 [3.8/3.9]

004000A401 ..(KA's)

QUESTION: 009 (1.00)

WHICH ONE (1) of the following conditions will actuate safety injection if the unit is in MODE 1?

- a. Two (2) channels of T-avg reading 540 degrees F.
- b. One (1) steam line has all channels reading 575 psig.
- c. Two (2) channels of containment pressure reading 3.6 psig.
- d. Three (3) channels of pressurizer pressure reading 1875 psig.

ANSWER: 009 (1.00)

b.

REFERENCE:

- 1. VEGP LO-LP-28103-11-C, pp. 38, & 49.
- 2. VEGP Text 8a, rev. 1, pp. 8a-72, & 73.
- 3. Both RO and SRO.
- 4. 013000A301 [?./3.9]

013000A301 ..(KA's)

QUESTION: 010 (1.00)

WHICH ONE (1) of the following conditions is required prior to resetting safety injection following an inadvertent actuation?

- a. Containment Isolation Phase A must be reset.
- b. Any ECCS pumps which started must be stopped.
- c. Both reactor trip breakers and bypass breakers must be open.
- d. Less than 60 seconds must have elapsed since SI was activated.

ANSWER: 010 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-28103-11-C, pp. 7, 23, & 54.
2. EQB HNUM 19104, update 1990-06-25, modified.
3. Both RO and SRC.
4. 013000K401 [3.9/4.3]

013000K401 ..(KA's)

QUESTION: 011 (1.00)

WHICH ONE (1) of the following describes an effect of power range channel N-42 upper detector failing HIGH?

- a. Reactor trips on high flux.
- b. Main feed regulating valves open.
- c. Control rods step out to high bank rod stop.
- d. OT delta T setpoint for one channel decreases.

ANSWER: 011 (1.00)

d.

REFERENCE:

1. NRC Sys. Man. PWR Westinghouse Chapt 12, rev. 1287, pp. 12-11, & 12-13.
2. VEGP Text 3c, rev. 5, pp. 3c-20, 21, & Fig. 3C-1, Text 8a, rev. 1, pg. 8a-24, Text 13a, rev. 9, pg. 13a-62.
3. VEGP LO-LP-28103-11-C, pg. 42, LO 4g2c.
4. Both RO and SRO.
5. 015000K101 [4.1/4.2]

015000K101 ..(KA's)

QUESTION: 012 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 2 at 1 percent power.
- Intermediate range instrument N-35 indicates 23 percent equivalent ion chamber amps.
- NIS HI FLUX IR REACTOR TRIP annunciator is NOT lit.
- Except as noted all plant equipment is operating normally.

WHICH ONE (1) of the following conditions is also consistent with these indications?

- a. Control rods fail to move outward in manual.
- b. Source range nuclear instrument detectors energize.
- c. INTMD RANGE COMP VOLTAGE FAILURE annunciator is lit.
- d. NIS HI FLUX LO SET POINT PWR RNG RX TRP annunciator is lit.

ANSWER: 012 (1.00)

a.

REFERENCE:

1. VEGP 17009-1, rev. 4, pg. 18.
2. VEGP 17010-1, rev. 15, pg. 40.
3. VEGP LO-LP-S0302-03, pg. 9.
4. VEGP Text 6a, rev. 3, pg. 6a-25.
5. VEGP logics, Fig. 7.2.1-1, shts. 3, & 4.
6. Both RO and SRO.
7. 015000K103 [3.1/3.1]

015000K103 ..(KA's)

QUESTION: 013 (. 00)

WHICH ONE (1) of the following will cause incore thermocouples to read HIGH?

- a. Broken junction weld at the detector.
- b. Breakdown of thermocouple wire insulation.
- c. Short circuit between detector wires at the junction box.
- d. Open circuit in the plant computer RTD in the reference junction box.

ANSWER: 013 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-36102-04-C, pp. 14, 19, & 20, LO 7.
- 2. 017020A201 [3.1/3.5]
- 3. Both RO and SRO.

017020A201 ..(KA's)

QUESTION: 014 (1.00)

WHICH ONE (1) of the following describes the response of the containment cooling fans to an SI signal?

- a. All fans start in LOW speed after 30.5 seconds.
- b. All fans start in HIGH speed after 30.5 seconds.
- c. Fans 3,4,5,6 start in LOW speed after 30.5 seconds and fans 1,2,7,8 start in LOW speed 20 seconds later.
- d. Fans 3, 5,6 start in HIGH speed after 30.5 seconds and fans 1,2,7,8 start in HIGH speed 20 seconds later.

ANSWER: 014 (1.00)

a.

REFERENCE:

1. VEGP LO-P-29130-04, pg. 6.
2. EQB HNUM 23611, Vogtle 1991-05-31, modified.
3. RO Only.
4. 022000A301 [4.1/4.5]

022000A301 ..(KA's)

QUESTION: 015 (1.00)

WHICH ONE (1) of the following conditions will automatically start a standby condensate pump?

- a. Condensate pump suction pressure at 20 inches Hg.
- b. Condensate pump discharge pressure at 650 psig.
- c. Main feed water pump suction pressure at 250 psig.
- d. Main feed water pump discharge pressure at 1250 psig.

ANSWER: 015 (1.00)

c.

REFERENCE:

1. VEGP Text 13a, rev. 9, pp. 13a-49, & 65.
2. Both RO and SRO.
3. 056000K103 [2.6/2.6]

056000K103 ..(KA's)

QUESTION: 016 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power.
- Two (2) steam generators indicate narrow range levels of 73 percent.
- Three (3) RCS loop T-avg instruments indicate 562 degrees F.

WHICH ONE (1) of the following automatic actions should have occurred?

- a. Main condensate pumps trip.
- b. Main feed water pumps trip.
- c. Main feed water isolation valves close.
- d. Main feed pump discharge isolation valves close.

ANSWER: 016 (1.00)

c.

REFERENCE:

1. VEGP Text 8a, rev. 1, pp. 8a-30, & 74, Text 13a, rev. 9, pg. 13a-54.
2. VEGP LO-LP-18201-11-C, pp. 16, & 19.
3. Both RO and SRO.
4. 059000A306 [3.2/3.3]

059000A306 ..(KA's)

QUESTION: 017 (1.00)

The following plant conditions exist:

- Unit 1 is at 12 percent power.
- Steam Generator Water Level controls are in automatic.

WHICH ONE (1) of the following failures will cause the bypass feed regulating valve to for SG-1 to OPEN?

- a. Nuclear instrument channel N-44 fails HIGH.
- b. No. 1 SG controlling level instrument LT-519 fails LOW.
- c. No. 1 SG controlling feed flow instrument FT-510 fails LOW.
- d. No. 1 SG controlling steam flow instrument FT-512 fails HIGH.

ANSWER: 017 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-18501-08-C, pp. 26, LO-TP-18501-003, & 004.
2. VEGP Text 13a, rev. 9, pp. 13a-26, 48, & 62.
3. Both RO and SRO.
4. 059000K104 [3.4/3.4]

059000K104 ..(KA's)

QUESTION: 018 (1.00)

WHICH ONE (1) of the following conditions will start both motor driven AND the turbine driven auxiliary feed water pumps?

- a. Both steam generator feed pumps trip.
- b. Three (3) pressurizer pressure channels reading 1750 psig.
- c. Three (3) controlling feedwater flow channels at 19 percent and both turbine impulse pressure channels at 45 percent.
- d. Three (3) NR steam generator level channels for SG-4 at 17 percent and both turbine impulse pressure channels at 45 percent.

ANSWER: 018 (1.00)

c.

REFERENCE:

- 1. VEGP Logics, Fig. 7.2.1-1, shts. 7, 15, & 16.
- 2. VEGP LO-LP-20101-15-C, pp. 56, & 57.
- 3. VEGP LO-LP-28103-11-C, pg. 35, LO 1.
- 4. Both RO and SRO.
- 5. 061000K402 [4.5/4.6]

061000K402 ..(KA's)

QUESTION: 019 (1.00)

WHICH ONE (1) of the following combinations of steam generators will be fed by the unaffected motor driven auxiliary feed water pump if power is lost to Bus 1AA02 and the normal valve lineup remains?

- a. 1 and 2.
- b. 2 and 3.
- c. 3 and 4.
- d. 4 and 1.

ANSWER: 019 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-20101-15-C, pg. 53.
2. VEGP One-line electrical 1X3D-AA-S3-D02B, rev. 6.
3. VEGP Text 13d, rev. 2, pp. 13d-2, & 7.
4. VEGP drwg 1X4DE161-2, rev. 23.
5. RO Only.
6. 061000K202 [3.7/3.7]

061000K202 ..(KA's)

QUESTION: 020 (1.00)

WHICH ONE (1) of the following is a purpose of the flow restrictor orifice in the discharge headers for each auxiliary feed pump?

- a. Reduces the flow to intact steam generators due to a feed line break.
- b. Reduces the ultimate containment pressure due to a steamline break.
- c. Reduces check-valve backflow and consequent AFW pump steam binding.
- d. Reduces the backflow from intact steam generators due to an AFW line break.

ANSWER: 020 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-20101-15-C, pg. 52.
2. VEGP drwg 1X4DB161-2, rev. 23.
3. VEGP Text 13d, rev. 2, pg. 13d-5.
4. RO Only.
5. 061000G007 [3.6/3.7]

061000G007 ..(KA's)

QUESTION: 021 (1.00)

WHICH ONE (1) of the following describes one of the automatic features of RV-18, Rad Waste Discharge Isolation Valve?

- a. Closes when the fuel building sump pumps start.
- b. Opens when radioactivity exceeds 5000 cps detectable.
- c. Opens when the waste monitor tank levels exceed 95 percent.
- d. Closes when total discharge flow rate is less than 5,000 gpm.

ANSWER: 021 (1.00)

d.

REFERENCE:

1. VEGP Text 17b, pp. 17b-20, & 24.
2. RO Only.
3. 068000A302 [3.6/3.6]

068000A302 ..(KA's)

QUESTION: 022 (1.00)

WHICH ONE (1) of the following describes the impact on the gaseous waste processing system if the detector for the waste gas discharge monitor (RE-14) fails LOW during a waste gas release:

- a. ERF display for RE-14 changes to magenta.
- b. Aux Bldg continuous exhaust shifts to the equipment bldg stack.
- c. Gaseous waste discharge trip valve (RV-14) will close automatically.
- d. Waste gas compressors will start returning the discharge stream to the selected gas decay tank.

ANSWER: 022 (1.00)

a.

REFERENCE:

- 1. VEGP Text 17c, rev. 5, pp. 17c-21. & 24.
- 2. Both RO and SRO.
- 3. 071000A202 [3.3/3.6]

071000A202 ..(KA's)

QUESTION: 023 (1.00)

WHICH ONE (1) of the following indicates a condition that will initiate a containment ventilation isolation?

- a. INTMD RADIATION ALARM annunciator lit.
- b. BYPASS CNMT VENT ISO HI RAD TEST annunciator lit.
- c. One manual containment spray switch in the actuation position.
- d. Loss of power to Containment Low Range radiation monitor RE-0003.

ANSWER: 023 (1.00)

d.

REFERENCE:

1. EQB HNUM 19115, Vogtle 1990-06-25, modified.
2. VEGP LO-LP-32101-13-C, pp. 19, & 20.
3. VEGP Text 11a, rev. 7, pg. 11a-30.
4. VEGP 17005-1, rev. 12, pp. 8, & 13.
5. VEGP LO-LP-29160-07, pg. 10.
6. Both RO and SRO.
7. 072000K401 [3.3/3.6]

072000K401 ..(KA's)

QUESTION: 024 (1.00)

WHICH ONE (1) of the following RCP pump combinations will result in loss of all normal pressurizer sprays if deenergized?

- a. RCP 1 and RCP 2.
- b. RCP 2 and RCP 3.
- c. RCP 3 and RCP 4.
- d. RCP 4 and RCP 1.

ANSWER: 024 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-16001-09, pg. 14.
2. VEGP Text, rev. 6, pg. 1c-4.
3. Both RO and SRO.
4. 002000K109 [4.1/4.1]

002000K109 ..(KA's)

QUESTION: 025 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 2.
- Accumulator isolation valves are closed.
- Power is available to the accumulator isolation valves.

WHICH ONE (1) of the following conditions would cause an accumulator isolation valve to open automatically?

- a. One (1) containment pressure channels reading 20 psig.
- b. Two (2) containment pressure channels reading 5.1 psig.
- c. Two (2) pressurizer pressure channels reading 1925 psig.
- d. Three (3) pressurizer pressure channels reading 1975 psig.

ANSWER: 025 (1.00)

b. or d.

REFERENCE:

1. VEGP LO-LP-13401-10-C, pp. 9, & 10, LO 4.
2. VEGP LO-LP-28103-11-C, pg. 38.
3. VEGP Text 9a, rev. 4, pg. 9a-17.
4. Both RO and SRC.
5. 006030K404 [3.9/4.1]

006030K404 ..(KA's)

QUESTION: 026 (1.00)

WHICH ONE (1) of the following describes the flowpath of the RHR system during Hot Leg Recirculation?

- a. Water from the RCS hot legs is pumped by the RHR pumps through the RHR heat exchangers and returned to all four RCS cold legs.
- b. Water from the RCS hot legs is pumped by both RHR pumps through the RHR heat exchanger bypasses and then to all four RCS hot legs.
- c. Water from the containment emergency sumps is pumped by the RHR pumps through the RHR heat exchangers and then to the RCS hot legs 1 and 4.
- d. Water from the containment emergency sumps is pumped by both RHR pumps through the RHR heat exchanger bypass piping and then to the RCS hot legs 1 and 4.

ANSWER: 026 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-13301-06-C, pp. 16, & 17.
- 2. EQB HNUM 23673, Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 006030K403 [3.4/3.6]

006030K403 ..(KA's)

QUESTION: 027 (1.00)

The following plant conditions exist:

- Unit 1 is at 100 percent power.
- Pressurizer level channel selector switch is in the "459/460" position.

WHICH ONE (1) of the following describes the effect of level transmitter LT-460 failing LOW? Assume NO operator action is taken.

- a. LV-459, LV-460 and the three (3) orifice isolation valves close.
- b. LT-459 automatically takes control and level stabilizes at program value.
- c. LV-460 and the three (3) orifice isolation valves close, LV-459 remains open.
- d. LT-459 automatically takes control and the level stabilizes at the manually selected value.

ANSWER: 027 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-16302-06-C pp. 15, LO-TP-16302-004, 005, & 007.
2. VEGP Logics, Fig. 7.2.1-1, sht. 20.
3. Both RO and SKO.
4. 011000A211 [3.4/3.6]

011000A211 ..(KA's)

QUESTION: 028 (1.00)

WHICH ONE (1) of the following explains why pressurizer level is programmed with reactor power?

- a. Programming allows use of either the PDP or CCP for changing the pressurizer level.
- b. Programming allows for an increase in RCS mass which reduces waste water during power changes.
- c. Programming allows for constant RCS mass with power to ensure sufficient pressurizer volume during transients.
- d. Programming allows use of a level transmitter with an output that is inversely proportional to the differential pressure measured.

ANSWER: 028 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-16302-06-C, pp. 5, 6, & 22, LO 1.
- 2. EQB HNUM 19121, Vogtle 1990-06-25, modified.
- 3. RO Only.
- 4. 011000K512 [2.7/3.3]

011000K512 ..(KA's)

QUESTION: 029 (1.00)

The following plant conditions exist:

- Unit 2 is in MODE 2.
- One (1) of the two switches for the Source Range Block permissive at P-6 has been placed in "BLOCK" momentarily.
- Power level is increasing toward the point of adding heat.

WHICH ONE (1) of the following describes the effect this alignment will have on plant equipment operations?

- a. A Source Range high flux trip will occur.
- b. One Source Range detector will be damaged.
- c. An Intermediate Range high flux trip will occur.
- d. Both Source Range detectors will become saturated.

ANSWER: 029 (1.00)

a.

REFERENCE:

1. VEGP 10-LP-28103-11-C, pg. 14.
2. EQB HNUM 23612, Vogtle 1991-05-31, modified.
3. Both RO and SRO.
4. 012000K604 [3.3/3.6]

012000K604 ..(KA's)

QUESTION: 030 (1.00)

WHICH ONE (1) of the following reactor trips is based on preventing departure from nucleate boiling?

- a. Pressurizer high pressure.
- b. Steam generator low-low level.
- c. Power range flux negative rate.
- d. Power range high flux high set poi...

ANSWER: 030 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-28103-11-C, pp. 15, 16, & 17.
- 2. Both RO and SRO.
- 3. 012000K402 [3.9/4.3]

012000K402 ..(KA's)

QUESTION: 031 (1.00)

WHICH ONE (1) of the following conditions will cause a "ROD DEVIATION/RADIAL TILT" alarm during a rod withdrawal?

- a. Central control card failure.
- b. Control Bank B moving before Control Bank A.
- c. 12-step difference between any two control banks.
- d. Shut down bank rod less than 228 steps after reaching 100 percent power.

ANSWER: 031 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-27201-07, pp. 13, & 14, LO 7f.
2. EQB HNUM 23603, Vogtle 1991-05-31, modified.
3. Both RO and SRO.
4. 014000G008 [2.9/3.1]

014000G008 ..(KA's)

QUESTION: 032 (1.00)

WHICH ONE (1) of the following sets of pressure instruments provide cold over pressure protection for the reactor coolant system?

- a. Wide range transmitter PT-403 and PT-405 from loops 1 and 4.
- b. Wide range transmitter PT-404 and PT-406 from loops 2 and 3.
- c. Pressurizer pressure channels I and III, PT-455 and PT-457.
- d. Pressurizer pressure channels II and IV, PT-456 and PT-458.

ANSWER: 032 (1.00)

a.

REFERENCE:

1. VEGP Text 1a, rev. 6, pg. 1a-21.
2. VEGP Logic Fig. 7.2.1-1, sht. 6, rev. 8.
3. Both RO and SRO.
4. 016000K101 [3.4/3.4]

016000K101 ..(KA's)

QUESTION: 033 (1.00)

WHICH ONE (1) of the following describes the reason for adding sodium hydroxide to the containment sprays?

- a. To lower pH and absorb byproduct Tritium.
- b. To lower pH and absorb fission product Iodine.
- c. To raise pH and absorb byproduct Tritium.
- d. To raise pH and absorb fission product Iodine.

ANSWER: 033 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-15101-09, pg. 18, LO 3.
- 2. RO Only.
- 3. 026000G007 [3.5/3.7]

026000C007 ..(KA's)

QUESTION: 034 (1.00)

WHICH ONE (1) of the following describes the response of the containment purge system to a phase A containment isolation? Assume that the line ups are normal for MODE 1.

- a. Mini-purge fans start.
- b. Normal purge fan starts.
- c. Mini-purge valves, AOV-2627B, and 2629B close.
- d. Normal purge valves, MOV-2626A and 2628B, close.

ANSWER: 034 (1.00)

c.

REFERENCE:

1. VEGP Text 24f, rev. 5, pp. 24f-19, & 22, Fig. 24f-2.
2. Both RO and SRO.
3. 029000A301 [3.8/4.0]

029000A301 ..(KA's)

QUESTION: 035 (1.00)

WHICH ONE (1) of the following is the preferred (normal) source of make-up to the spent fuel pool to replace evaporative losses?

- a. Boron recycle system.
- b. Demineralized Water System.
- c. Refueling Water Storage Tank.
- d. Reactor Makeup Water Storage Tank.

ANSWER: 035 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-25102-09-C, pg. 10.
2. VEGP Text 18b, rev. 2, pg. 18b-6.
3. EQB HNUM 23613, Vogtle 1991-05-31, modified.
4. Both RO and SRO.
5. 033000K401 [2.9/3.2]

033000K401 ..(KA's)

QUESTION: 036 (1.00)

WHICH ONE (1) of the following signals will cause the Steam Generator Blowdown sample isolation valves to automatically close?

- a. Feedwater isolation signal.
- b. Motor driven AFW auto start signal.
- c. Containment isolation phase A signal.
- d. RE-0021 steam generator blowdown high radiation signal.

ANSWER: 036 (1.00)

b.

REFERENCE:

- 1. VEGP LO-LP 24101-10, pg. 10.
- 2. EOB HNUM 23655, Vogtle 1991-05-31.
- 3. Both RO and SRO.
- 4. 035010K403 [2.6/2.8]

035010K403 ..(KA's)

QUESTION: 037 (1.00)

The following plant conditions exist:

- Unit 1 is at 65 percent power.
- Steam generator water level control is in automatic.
- No. 1 SG steam flow selector is in the 512 position.
- The associated steam pressure transmitter PT-514 fails HIGH.

WHICH ONE (1) of the following describes system response to this failure?

- a. Main feed water pumps reduce speed.
- b. Main feedwater regulating valves throttle open.
- c. SG 1 atmospheric relief valve opens on HIGH SG pressure.
- d. Reactor trip breakers open on HIGH steam generator water level.

ANSWER: 037 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-18501-08-C, pg. 24, LO 10.
2. VEGP Text, rev. 9, Fig. 13a-25.
3. VEGP Drwg. 1X4DB168-3, rev. 21.
4. Both RO and SRO.
5. 035010A301 [4.1/3.9]

035010A301 ..(KA's)

QUESTION: 038 (1.00)

WHICH ONE (1) of the following will generate a main steam line isolation WITHOUT generating a safety injection signal?

- a. Pressure in No. 2 steam line reading 550 psig.
- b. Two (2) containment pressure channels reading 16 psig.
- c. Three (3) pressurizer pressure channels reading 1850 psig.
- d. Pressure in No. 3 steam line has decreased 200 psig in the last minute with low pressure steamline isolation BLOCKED.

ANSWER: 038 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-21102-12-C, pg. 22, LO 15.
- 2. VEGP Text 8a, rev. 1, pp. 8a-28, 29, 30, & 31.
- 3. Both RO and SRO.
- 4. 039000A302 [3.1/3.5]

039000A302 ..(KA's)

QUESTION: 039 (1.00)

WHICH ONE (1) of the following is powered from a 4160 VAC bus?

- a. Condensate pumps.
- b. Heater drain pumps.
- c. Electric steam boiler.
- d. Circulating water pumps.

ANSWER: 039 (1.00)

b.

REFERENCE:

1. VEGP drwg 1X3D-AA-A01A rev. 16, & 1X3D-AA-D04A rev. 8.
2. Both RO and SRQ.
3. 062000K201 [3.3/3.4]

062000K201 ..(KA's)

QUESTION: 040 (1.00)

WHICH ONE (1) of the following describes the effect on Channel I instruments if power is interrupted to the inverter supplying panel 1AY1A (vital instrument bus, channel I)?

- a. No loss of voltage, panel 1AY1A has a redundant 120 VAC power supply.
- b. No loss of voltage, panel 1AY1A will be automatically supplied from the batteries if an inverter fails.
- c. Temporary loss, panel 1AY1A can be manually re-energized from 480 VAC via regulated transformers.
- d. Temporary loss, panel 1AY1A will be automatically re-energized from 480 VAC via regulated transformers.

ANSWER: 040 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-01001-03, pg. 16, LO 8.
2. VEGP drwg 1X3D-AA-G01A.
3. EQB HNUM 19130, Vogtle 1990-06-25, modified.
4. RO Only.
5. 062000A210 [3.0/3.3]

062000A210 ..(KA's)

QUESTION: 041 (1.00)

WHICH ONE (1) of the following systems is the preferred alternative source of water for the nuclear service cooling towers if the nuclear service cooling tower make up pumps are not serviceable?

- a. Potable water.
- b. Utility water.
- c. Circulating water.
- d. River make up water.

ANSWER: 041 (1.00)

d.

REFERENCE:

1. VEGP Text 10n, rev. 3, pg. 10h-2, Text 10j, rev. 4, Fig. 1CJ-1.
2. Both RO and SRO.
3. 075000K108 [3.2/3.2]

075000K108 ..(KA's)

QUESTION: 042 (1.00)

WHICH ONE (1) of the following is a function of the Local Suppression Indicating Panels of the Fire Detection System?

- a. Provide readout of fire system instrumentation in the control room.
- b. Monitor fire detectors, processes trouble signals, and generates alarms.
- c. Provides signals to actuate fire protection systems and monitors fire protection system status.
- d. Monitors status of which detectors in a zone are in an alarm condition when a zone contains many detectors.

ANSWER: 042 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-22101-04-C, pp. 7, & 8.
- 2. EQB HNUM 23659, Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 086000G007 [3.0/3.2]

086000G007 ..(KA's)

QUESTION: 043 (1.00)

WHICH ONE (1) of the following conditions satisfies one of the opening criteria for the "A" train Residual Heat Removal System loop suction isolation valves, HV-8701A and HV-8701B?

- a. RWST suction valve 8812B is closed.
- b. Charging pump suction 8804A is closed.
- c. Wide range RCS pressure equals 380 psig.
- d. Safety injection suction valve 8804B is open.

ANSWER: 043 (1.00)

b.

REFERENCE:

1. VEGP Text 10a, rev. 7, pg. 10a-16.
2. Both RO and SRO.
3. 005000K407 [3.2/3.5]

005000K407 ..(KA's)

QUESTION: 044 (1.00)

WHICH ONE (1) of the following satisfies the interlock logic for opening the Train A RHR containment sump suction valve HV-8811A?

- a. Both loop suction valves (HV-8701A and B) closed, and RHR to CCP suction (HV-8804A) closed.
- b. One of two loop suction valves (HV-8701A or B) closed, and RHR to CCP suction (HV-8804A) closed.
- c. Both loop suction valves (HV-8701A and B) closed, and RWST suction (HV-8812A) closed.
- d. One of two loop suction valves (HV-8701A or B) closed, and RWST suction (HV-8812A) closed.

ANSWER: 044 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-12101-24-C, pp. 63, LO 8e.
2. VEGP Exam Bank, CL-12, Ques. 2.07.
3. RO Only.
3. 005000A405 [2.8/2.8]

005000A405 ..(KA's)

QUESTION: 045 (1.00)

WHICH ONE (1) of the following provides dilution air for the containment hydrogen purge system?

- a. Plant service air system.
- b. Plant breathing air system.
- c. Containment mini-purge system.
- d. Containment normal purge system.

ANSWER: 045 (1.00)

a.

REFERENCE:

- 1. VEGP Text 24f, rev. 5, pg. 24f-5.
- 2. RO Only.
- 3. 028000G007 [3.2/3.3]

028000G007 ..(KA's)

QUESTION: 046 (1.00)

WHICH ONE (1) of the following fuel handling components or functions is controlled at the containment building console?

- a. Crane interlock bypass.
- b. Bridge interlock bypass.
- c. Enable fuel transfer cart movement.
- d. Operate fuel transfer tube isolation valve.

ANSWER: 046 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-25101-11-C, pp. 59, & 60, LO 8a, & b.
2. Both RO and SRO.
3. 034000G009 [3.0/3.0]

034000G009 ..(KA's)

QUESTION: 047 (1.00)

WHICH ONE (1) of the following conditions will partially satisfy criteria for arming the steam dumps?

- a. Reactor trip breakers are open.
- b. Impulse pressure channel PT-505 failed LOW.
- c. Impulse pressure channel PT-506 failed HIGH.
- d. Two (2) RCS loop temperature channels reading 548 degrees F.

ANSWER: 047 (1.00)

a.

REFERENCE:

1. VEGP Text 8a, rev. 1, pp. 8a-39, & 42, Text 12b, rev. 4, pg. 12b-16.
2. Both RO and SRO.
3. 041020K417 [3.7/3.9]

041020K417 ..(KA's)

QUESTION: 048 (1.00)

WHICH ONE (1) of the following sets of turbine steam valves will ONLY close automatically as the result of a turbine trip?

- a. Turbine control valves.
- b. Intermediate stop valves.
- c. Modulated intercept valves.
- d. Non-modulated intercept valves.

ANSWER: 048 (1.00)

b.

REFERENCE:

1. VEGP Text 14a, rev. 6, pp. 14a-4, & 5.
2. Both RO and SRO.
3. 045000K111 [3.6/3.7]

045010K111 ..(KA's)

QUESTION: 049 (1.00)

The following plant conditions exist:

- All plant systems are operating as designed.
- Nuclear Service Cooling Water (NSCW) pumps 1 and 3 are operating in train "A".

WHICH ONE (1) of the following describes the system response if the No. 1 NSCW pump trips?

- a. NSCW pump 2 starts immediately.
- b. Discharge valve for NSCW pump 5 opens in 40 to 45 seconds.
- c. NSCW pump 2 starts when its discharge valve is full open.
- d. Tower bypass/return valves stroke closed to maintain system pressure.

ANSWER: 049 (1.00)

b.

REFERENCE:

1. VEGP Text 10d, rev. 7, pg. 10d-13.
2. VEGP LO-LP-06101-18-C, pg. 32, LO 10 & 12.
3. Both RO and SRO.
4. 076000K402 [2.9/3.2]

076000K402 ..(KA's)

QUESTION: 050 (1.00)

WHICH ONE (1) of the following actions are directed to be taken if instrument air pressure decreases below 80 psig?

- a. Place service air dryer into the 2-chamber full flow mode.
- b. Isolate affected unit air system from the other unit if cross tied.
- c. Trip the unit and enter EOP 19000-C, "E-0, Reactor Trip or Safety Injection."
- d. Dispatch an operator to manually isolate turbine building instrument air.

ANSWER: 050 (1.00)

b.

REFERENCE:

- 1. VEGP 18028, rev. 10, pg. 3.
- 2. VEGP LO-LP-02110-13-C, LO 5.
- 3. RO Only.
- 4. 078000A301 [3.1/3.2]

078000A301 ..(KA's)

QUESTION: 051 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power.
- EOP 19000-C, "E-0, Reactor Trip or Safety Injection," was entered and a transition to EOP 19001-C, "ES-0.1, Reactor Trip Response," was made.
- Digital rod position indicator shows Rods P-4 and B-12 at 228 steps, and Rod D-12 at 200 steps.

WHICH ONE (1) of the following actions is required per EOP-19001, "ES-0.1"?

- a. Emergency borate 104 ppm total.
- b. Emergency borate 312 ppm total.
- c. Manually drive the stuck rods to the bottom.
- d. Notify Reactor Engineering to run incore flux maps.

ANSWER: 051 (1.00)

b.

REFERENCE:

1. VEGP 19001-C (ES-0.1), rev. 11, pg. 3.
2. VEGP Text 6a, rev. 3, Fig. 6-26.
3. Both RO and SRO.
4. 000005A203 [3.5/4.4]

000005A203 ..(KA's)

QUESTION: 052 (1.00)

The following plant conditions exist:

- Unit 2 is at 45 percent power.
- RCP TRIP annunciator lit.
- RCP LOOP 3 LOW FLOW ALERT annunciator lit.
- LOOP 3 RTD BYPASS LO FLOW annunciator lit.

WHICH ONE (1) of the following actions is an IMMEDIATE ACTION for this event per VEGP 18005-C, "Partial Loss of Flow"?

- a. Verify No. 3 steam generator level is trending to 50 percent.
- b. Verify No. 3 steam generator level is trending to 65 percent.
- c. Verify Nos. 1, 2, and 4 steam generator levels are between 45 and 55 percent.
- d. Verify Nos. 1, 2, and 4 steam generator levels are between 60 and 70 percent.

ANSWER: 052 (1.00)

b.

REFERENCE:

1. VEGP 18005-C, rev. 5, pp. 1, & 2.
2. Both RO and SRO.
3. 000015G010 [3.4/3.4]

000015G010 ..(KA's)

QUESTION: 053 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power due to a loss of off-site power.
- All but 3 rod bottom lights are lit.
- 3 control rods are at 24 steps.
- A and B emergency diesel generators are running and loaded.
- A and B charging pumps are running.
- Operators are in EOP 19001-C, "ES-0.1, Reactor Trip Response."

WHICH ONE (1) of the following is the required operator action to ensure adequate shutdown margin for this event?

- a. Open RWST isolation valves 1-LV-0112D and 1-LV-0112E.
- b. Manually control VCT level between 30 and 50 percent.
- c. Place the blender control switch to the AUTO position.
- d. Start one (1) Reactor Make Up pump and reset the Boric Acid Blend Control, 1-FQI-0111.

ANSWER: 053 (1.00)

a.

REFERENCE:

1. VEGP 13009-9, rev. 8, pp. 5, & 13.
2. VEGP 199001-C, rev. 11, pg. 3.
3. Both RO and SRO.
4. 000024A206 [3.6/3.7]

000024A206 ..(KA's)

QUESTION: 054 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 1.
- ACCW LO HDR PRESS annunciator lit.
- ACCW RCP 3 CLR LO FLOW annunciator lit.
- ACCW RCP 3 CLR OUTLET HI TEMP annunciator lit.
- ACCW RTN HDR FROM RCP LO FLOW annunciator lit.

WHICH ONE (1) of the following conditions satisfy criteria for tripping the reactor coolant pumps according to VEGP 18022-C "Loss of Auxiliary Component Cooling Water"?

- a. Seal water outlet temperature at 220 degrees F.
- b. Motor stator winding temperature at 220 degrees F.
- c. Motor lower radial bearing temperature at 220 degrees F.
- d. Pump lower seal water bearing temperature at 220 degrees F.

ANSWER: 054 (1.00)

c.

REFERENCE:

1. VEGP 18022-C, rev. 5, pg. 4.
2. Both RO and SRO.
3. 000026K303 [4.0/4.2]

000026K303 ..(KA's)

QUESTION: 055 (1.00)

The following plant conditions exist:

- Pressure Channel Selector Switch is in the 455-456 position.
- PRZR HI PRESS is in alarm.
- PRZR HI PRESS CHANNEL ALERT is in alarm.
- Pressurizer pressure channel PT-456 is reading 300 psig higher than the other channels.
- Pressurizer pressure channels PT-455 and PT-458 are decreasing.

WHICH ONE (1) of the following is an operator IMMEDIATE ACTION?

- a. Close PORV-455.
- b. Close PORV-456.
- c. Select PT-455 to control.
- d. Select PT-456 to control.

ANSWER: 055 (1.00)

b.

REFERENCE:

1. VEGP 18001-C, rev. 9, pg. 5.
2. VEGP LO-LP-60301-06-C, pg. 16, LO 11.
3. VEGP Logics, Fig. 7.2.1-1, shts. 6, 11, & 19.
4. RO Only.
5. 000027G010 [3.7/3.8]

000027G010 ..(KA's)

QUESTION: 056 (1.00)

If the pressure in the No. 1 steam generator is 1228 psig, WHICH ONE (1) of the following is the MINIMUM number of code safety valves that should be open? Assume a zero setpoint tolerance.

- a. 1.
- b. 2.
- c. 3.
- d. 4.

ANSWER: 056 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-21102-12-C, pp. 17, & 36, LO 2c.
- 2. RO Only.
- 3. 000040A109 [3.4/3.4]

000040A109 ..(KA's)

QUESTION: 057 (1.00)

The following plant conditions exist:

- Unit 1 is at 45 percent power.
- TURB CNDSR LO VAC annunciator lit.
- Condenser vacuum reads 20.5 inches Hg.

WHICH ONE (1) of the following should have occurred?

- a. Turbine run back.
- b. Turbine trip only.
- c. Reactor trip initiating a turbine trip.
- d. Turbine trip initiating a reactor trip.

ANSWER: 057 (1.00)

b.

REFERENCE:

1. VEGP 17019-1, rev. 8, pp. 11, & 19.
2. Both RO and SRO.
3. 000051A202 [3.9/4.1]

000051A202 ..(KA's)

QUESTION: 058 (1.00)

The following plant conditions exist:

- Off site power is lost.
- Emergency diesel generators fail to start.
- RCS pressure is 1500 psig.

WHICH ONE (1) of the following is a concern regarding the plant cooldown performed in EOP 19100-C, "ECA-0.0, Loss of All AC"?

- a. Mixing of injected boron is poor during the cooldown.
- b. Accumulator injection will cause counter flow forces.
- c. Reactor outlet temperatures approximate steam generator temperatures.
- d. Positive reactivity is added during steam generator depressurization.

ANSWER: 058 (1.00)

d.

REFERENCE:

1. VEGP 19002-C, rev. 8, pg. 2.
2. VEGP 19100-C, rev. 7, pg. 21.
3. VEGP LO-LP-37031-07-C, pg. 14, LO 5.
4. Both RO and SRO.
5. 000055K102 [4.1/4.4]

000055K102 ..(KA's)

QUESTION: 059 (1.00)

The following plant conditions exist:

- 19100-C "ECA-0.0 LOSS OF ALL AC POWER" has been entered.

WHICH ONE (1) of the following explains the consequence of depressurizing the steam generators below 170 psig during the plant cooldown?

- a. Nitrogen from the SI accumulators may be injected into the RCS.
- b. Calibration of the steam generator level instruments become invalid.
- c. Steam generator pressure may become inadequate for driving the TDAFW pump.
- d. Pressurized thermal shock conditions may cause fracture of the reactor pressure vessel.

ANSWER: 059 (1.00)

a.

REFERENCE:

1. VEGP 19100-C, rev. 7, pg. 19.
2. VEGP Text 13d, rev. 2, pg. 13d-4.
3. VEGP LO-LP-37031-07-C, pg. 15, LO 5.
4. RO Only.
5. 000055G007 [3.6/3.7]

000055G007 ..(KA's)

QUESTION: 060 (1.00)

WHICH ONE (1) of the following vital instrument panels, if deenergized, will result in a loss of the Train B sequencer?

- a. 1NY1N.
- b. 1NY2N.
- c. 1BY1B.
- d. 1BY2B.

ANSWER: 060 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-60324-04-C, pp. 37, & 38, LO 4c.
2. Both RO and SRO.
3. 000057A220 [3.6/3.9]

000057A220 ..(KA's)

QUESTION: 061 (1.00)

The following plant conditions exists:

- A large brush fire is burning near the plant.
- Smoke has entered the intakes for the control room ventilation system.

WHICH ONE (1) of the following describes how the control room HVAC is reconfigured to protect the control room personnel from this hazard?

- a. Operators manually shift the control room HVAC to the purge mode.
- b. Operators manually shift the control room HVAC to the isolation mode.
- c. Smoke detectors cause automatic shift of the control room HVAC to the purge mode.
- d. Smoke detectors cause automatic shift of the control room HVAC to the emergency mode.

ANSWER: 061 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-23101-09-C, pp. 13, & 14, LO 1.
2. VEGP Text 24b, rev. 6, pg. 24b-47.
3. Both RO and SRO.
4. 000067A105 [3.0/3.1]

000067A105 ..(KA's)

QUESTION: 062 (1.00)

The following conditions exist:

- The control room is evacuated due to fire.
- Control of all components has been transferred to the shutdown panels.
- The shutdown panel switch for the "B" SI pump is "OFF" when a valid SI signal is received.

WHICH ONE (1) of the following describes the operation of the 'B' SI pump?

- a. It will start automatically and cannot be secured until SI is reset.
- b. It will start automatically and remain running until its associated breaker is locally opened.
- c. It can be started manually by the operator using the shutdown panel switch without first resetting SI.
- d. It can be started manually by the operator only after resetting SI and then using the shutdown panel switch.

ANSWER: 062 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-60327-03-C, pp. 7, & 19, LO 3.
2. EQB HNUM 23689, Vogtle 1991-05-31, modified.
3. RO Only.
4. 000068A121 [3.9/4.1]

000068A121 ..(KA's)

QUESTION: 063 (1.00)

WHICH ONE (1) of the following conditions constitutes a LOSS of containment integrity per Technical Specifications?

- a. Containment leak rate exceeds Tech Spec 3.6.1.2 while in MODE 5.
- b. Outer airlock door open for the passage of personnel while in MODE 4.
- c. Inner air lock door open for the passage of personnel while in MODE 5.
- d. Charging isolation valves HV-8105 and HV-8106 deenergized open while in MODE 4.

ANSWER: 063 (1.00)

d.

REFERENCE:

- 1. VEGP Tech Spec 1.4, 3.6.1.1, 3.6.1.2, 3.6.1.3.
- 2. VEGP drwg 1X4DB116-1.
- 3. VEGP LO-LP-39210-C, pp. 1, & 9, LO 2.
- 4. Both RO and SRO.
- 5. EQB HNUM 19157, Vogtle 1990-06-25, modified.
- 6. 000069A201 [3.7/4.3]

000069A201 ..(KA's)

QUESTION: 064 (1.00)

WHICH ONE (1) of the following explains why the RCPs are tripped early in the response to a loss of secondary heat sink?

- a. To eliminate the heat input from the RCPs.
- b. To protect the RCPs from potential seal damage.
- c. To ensure that natural circulation is established.
- d. To prevent the RCPs from causing an RCS depressurization transient.

ANSWER: 064 (1.00)

a.

REFERENCE:

- 1. VEGP LO-LP-37051-07-C, pg. 10.
- 2. EQB HNUM 23640, Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 000074K304 [3.9/4.2]

000074K304 ..(KA's)

QUESTION: 065 (1.00)

WHICH ONE (1) of the following completes the statement?

Flow through the Gross Failed Fuel Detector may be secured by operating valves from the _____ or the _____.

- a. QMCB, Nuclear Sampling Panel.
- b. QPCP, Nuclear Sampling Panel.
- c. QMCB, Gross Failed Fuel Detector Panel.
- d. QPCP, Gross Failed Fuel Detector Panel.

ANSWER: 065 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-64202-03, pg. 9, LO 1a, & 1c.
2. EQB HNUM 23695, Vogtle 1991-05-31, modified.
3. Both RO and SRO.
4. 000076A104 [3.2/3.4]

000076A104 ..(KA's)

QUESTION: 066 (1.00)

WHICH ONE (1) of the following conditions would require entry into a Technical Specification action statement?

- a. Reactor power is 3417 MWt by Previous Instantaneous Reading.
- b. QPTR is calculated per surveillance to be 1.021 on NIS upper detectors.
- c. One (1) channel of AFD indicating 4 percent above target at 95 percent power.
- d. Auctioneered high T-avg is 1.5 degrees F above T-ref at 100 percent power.

ANSWER: 066 (1.00)

b.

REFERENCE:

1. VEGP 18003-C, rev. 11, pg. 4.
2. VEGP Text 6a, rev. 3, Fig. 6-26.
3. VEGP LO-LP-60303-11-C, pp. 7, & 35, LO 21.
4. RO Only.
5. 000003G003 [3.3/3.8]

000003G003 ..(KA's)

QUESTION: 067 (1.00)

WHICH ONE (1) of the following explains why the main turbine stop valves on the Turbine Control Panel are checked closed following a reactor trip?

- a. Conserve pressurizer inventory.
- b. Prevent excessive RCS cooldown.
- c. Conserve steam generator inventory.
- d. Prevent reverse power of the main generator.

ANSWER: 067 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-37011-06-C, pg. 8.
2. Both RO and SRO.
3. 000007K301 [4.0/4.6]

000007K301 ..(KA's)

QUESTION: 068 (1.00)

The following plant conditions exist:

- Unit 1 is at 100 percent power.
- Pressurizer pressure channel selector is in the 455-456 position.
- Pressurizer pressure transmitter PT-456 fails to 2390 psig.
- Except for the noted transmitter failure, all of the plant controllers are operating normally.

WHICH ONE (1) of the following actions or conditions will STOP further plant degradation from this event?

- a. Operators manually closing PORV PCV-455.
- b. Operators manually closing pressurizer spray valve PCV-455B.
- c. One (1) pressurizer pressure transmitter, PT-458, sensing 2150 psig.
- d. Two (2) pressurizer pressure transmitters, PT-455 and PT-457, sensing 2180 psig.

ANSWER: 068 (1.00)

d.

REFERENCE:

1. VEGP Logics, Fig. 7.2.1-1, shts. 11, 18, & 19.
2. VEGP LO-LP-60301-06-C, pg. 14.
3. Both RO and SRO.
4. 000008A206 [3.3/3.6]

000008A206 ..(KA's)

QUESTION: 069 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 3.
- At 1300 hrs RCS temperature is 450 degrees F.

WHICH ONE (1) of the following will cause the MOST severe pressurized thermal shock to the reactor pressure vessel?

- a. At 1330 hrs RCS temperature is 401 degrees F.
- b. At 1330 hrs RCS temperature is 499 degrees F.
- c. At 1400 hrs RCS temperature is 349 degrees F.
- d. At 1400 hrs RCS temperature is 551 degrees F.

ANSWER: 069 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-16202-03, rev. 3, pp. 7, & 8, LO 3.
2. VEGP 19200-C, rev. 8, pg. 7.
3. VEGP Technical Specifications 3.4.9.1, & Table 1.2.
4. Both RO and SRO.
5. 000009K308 [3.6/4.1]

000009K308 ..(KA's)

QUESTION: 070 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power due to low pressurizer pressure.
- PORV PCV-456 is open and the block valve will NOT close.
- Reactor coolant pumps have been stopped.

WHICH ONE (1) of the following explains why natural circulation flow could stop under these conditions?

- a. Steam voids will form in the RCP volutes.
- b. Non-condensable gases will fill the reactor head.
- c. Steam voids will form in the steam generator U-tubes.
- d. Non-condensable gases will collect at the steam generator tube sheets.

ANSWER: 070 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-36101-04-C, pp. 21, 22, 23, 24, & 29, LO 12.
2. Both RO and SRO.
3. 000009K101 [4.2/4.7]

000009K101 ..(KA's)

QUESTION: 071 (1.00)

The following plant conditions exist:

- A large break LOCA has occurred on Unit 1.
- RWST level is at 9 percent.

WHICH ONE (1) of the following describes the action that should occur as a result of this RWST level?

- a. RWST to Emergency Sump semi-automatic swapover.
- b. RWST isolation valves are closed automatically.
- c. Spray additive isolation valves are manually closed.
- d. Containment emergency sump pumps start automatically.

ANSWER: 071 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-15101-09, pg. 7, LO 8.
2. Both RO and SRO.
3. 000011A111 [4.2/4.2]

000011A111 ..(KA's)

QUESTION: 072 (1.00)

WHICH ONE (1) of the following explains the purpose for shifting to Hot Leg Recirculation during a large break LOCA?

- a. Conserves RWST inventory.
- b. Breaks up boron precipitation.
- c. Reduces the rates of RCS cooldown.
- d. Stabilizes RCS temperatures when a pressurized thermal shock is imminent.

ANSWER: 072 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-37114-06, pp. 5, & 9, LO 9.
2. EQB HNUM 23642, Vogtle 1991-05-31, modified.
3. RO Only.
4. 000011K313 [3.8/4.2]

000011K313 ..(K[^]'s)

QUESTION: 073 (1.00)

The following plant conditions exist:

- Unit 2 is at 100 percent power.
- Pressurizer level is increasing.
- T-avg is constant.
- LTDN HX OUT HI PRESS annunciator lit.
- Charging flow is decreasing.
- All control systems are in automatic.

WHICH ONE (1) of the following events would cause these conditions?

- a. Loss of VCT make up.
- b. Loss of charging flow.
- c. Orifice isolation valve HV-8149B opening.
- d. Letdown pressure control valve PCV-131 closing.

ANSWER: 073 (1.00)

d.

REFERENCE:

1. VEGP 18007-C, rev. 6, pp. 2, 3, 5, & 11.
2. Both RO and SRO.
3. 000022G011 [3.3/3.6]

000022G011 ..(KA's)

QUESTION: 074 (1.00)

WHICH ONE (1) of the following describes why RHR flow is limited when RCS water level is at mid-nozzle level?

- a. To prevent loss of pump suction due to low net positive suction head.
- b. To prevent a pump overcurrent trip due to the low discharge pressure.
- c. To prevent loss of pump suction due to gas entrainment in the impeller.
- d. To prevent a pump overspeed trip from runout due to low discharge pressure.

ANSWER: 074 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-12101-24-C, pg. 67, LO 18c.
2. VEGP 13011-1, rev. 23, pg. 2, precaution 2.1.6.
3. EQB HNUM 2369 Vogtle 1991-05-31, modified.
4. Both RO and SRO.
5. 000025K101 [3.9/4.3]

000025K101 ..(KA's)

QUESTION: 075 (1.00)

WHICH ONE (1) 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. Prevents the PRT rupture disc from bursting due to a PORV lifting.
- b. Ensures that the injection rate of boric acid into the core is sufficient.
- c. Ensures that the PORV's are operating properly to prevent the code safety valves from lifting.
- d. Prevents the PORVs from opening and diverting a portion of the full flow of boric acid from the core.

ANSWER: 075 (1.00)

b.

REFERENCE:

- 1. VEGP 19211-C, rev. pg. 3.
- 2. VEGP LO-LP-37041 pg. 13, LO 7.
- 3. EQB HNUM 19147, v 1990-06-25, modified.
- 4. Both RO and SRO.
- 5. 000029K312 [3.4/4.7]

000029K312 ..(KA's)

QUESTION: 076 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 2 at $1E+03$ CPS.
- SOURCE RANGE HI VOLTAGE FAILURE annunciator lit.
- N-31 fails downscale.

WHICH ONE (1) of the following is an operator IMMEDIATE ACTION in response to this event?

- a. Select the Source Range channel N-32 on NR-45.
- b. Suspend all operations in the fuel handling building.
- c. Place Source Range channel N-31 level trip switch in bypass.
- d. Suspend all operations involving positive reactivity changes.

ANSWER: 076 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-60302-03, pg. 6.
2. VEGP 180.2-C, rev. 5, pg. 2.
3. VEGP 17010-1, rev. 15, pg. 5.
4. Both RC and SRC.
5. EQB HNUM 23693, Vogtle 1991-05-31, modified.
6. 000032G010 [2.9/3.1]

000032G010 ..(KA's)

QUESTION: 077 (1.00)

WHICH ONE (1) of the following describes the effects of a loss of compensating voltage to intermediate range nuclear instrument N-36 during a reactor shutdown?

- a. N-36 will indicate LOW and the source range detector voltage will energize.
- b. N-36 will indicate HIGH and the source range detector voltage will energize.
- c. N-36 will indicate LOW and the source range detector voltage will NOT energize.
- d. N-36 will indicate HIGH and the source range detector voltage will NOT energize.

ANSWER: 077 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-17201-07-C, pg. 10, LO 8.
2. Both RO and SRD.
3. 000033A211 [3.1/3.4]

000033A211 ..(KA's)

QUESTION: 078 (1.00)

WHICH ONE (1) of the following is the reason that the Steam Generator Atmospheric Relief Valve (ARV) setpoint is changed by procedure in response to a steam generator tube leak?

- a. Provides code-compliance over-pressure protection of the steam generator during this event.
- b. Minimizes the possibility of the ARV on the NON-faulted SGs from actuating and causing a release.
- c. Provides additional over-pressure protection to the steam generator in the event of additional tube failures.
- d. Minimizes the possibility of a release by allowing the maximum steam generator pressure without lifting the safeties.

ANSWER: 078 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-60309-08-C, pg. 12.
- 2. EQB HNUM 23712, Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 000037K307 [4.2/4.4]

000037K307 ..(KA's)

QUESTION: 079 (1.00)

The following plant conditions exist:

- A steam generator tube rupture occurred.
- Unit 1 has tripped and EOPs were properly followed.
- The SRO is currently in VEGP 19031 "ES-3.1, POST-SGTR COOLDOWN USING BACKFILL."
- At 1310 hrs, cooldown was started and at that time the RCS was at the minimum temperature for criticality.

WHICH ONE (1) of the following conditions is indicative of an acceptable cooldown rate according to VEGP 19031, "ES-3.1, POST-SGTR COOLDOWN USING BACKFILL"?

- a. Hot leg instruments read 490 degrees F at 1340 hrs.
- b. Cold leg instruments read 480 degrees F at 1350 hrs.
- c. Hot leg instruments read 470 degrees F at 1400 hrs.
- d. Cold leg instruments read 460 degrees F at 1410 hrs.

ANSWER: 079 (1.00)

d.

REFERENCE:

1. VEGP 19031, rev. 7, pg. 5.
2. VEGP LO-LP-37312-06-C, pg. 11, LO 4.
3. VEGP LO-LP-16101-06-C, pg. 16, LO 3.
4. Both RO and SRO.
5. 000038A136 [4.3/4.5]

000038A136 ..(KA's)

QUESTION: 080 (1.00)

WHICH ONE (1) of the following explains why it is important to promptly match T-avg to T-ref during a loss of main feed pump event?

- a. To close the steam dumps thereby reducing steam flow.
- b. To reduce RCS temperature thereby increasing the DNBR.
- c. To reduce RCS pressure thereby reducing required feed line pressure.
- d. To close the main feed regulating valves thereby preserving main feed inventory.

ANSWER: 080 (1.00)

a.

REFERENCE:

- 1. VEGP LO-LP-60314-05-C, pp. 6, & 12, LO 5.
- 2. Both RO and SRO.
- 3. 000054K304 [4.4/4.6]

000054K304 ..(KA's)

QUESTION: 081 (1.00)

WHICH ONE (1) of the following symptoms is initially common to a break in a main steam line AND a break in a main feed line assuming a constant load on the turbine?

- a. Reactor power increases.
- b. Steam generator pressure decreases.
- c. Steam generator pressure increases.
- d. Steam generator levels fluctuate widely.

ANSWER: 081 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-37121-07-C, pp. 7, & 8, LO 5.
2. RO Only.
3. 000054K101 [4.1/4.3]

000054K101 ..(KA's)

QUESTION: 082 (1.00)

WHICH ONE (1) of the following will result from a loss of 125 VDC bus 1AD1?
Assume neither diesel is running.

- a. Diesel generator DG1A will start automatically.
- b. Diesel generator DG1B will start automatically.
- c. Diesel generator DG1A will not start from the control room.
- d. Diesel generator DG1B will not start from the control room.

ANSWER: 082 (1.00)

c.

REFERENCE:

1. VEGP 18034-4, rev. 1, pg. 2.
2. Both RO and SRO.
3. 000058A203 [3.5/3.9]

000058A203 ..(KA's)

QUESTION: 083 (1.00)

WHICH ONE (1) of the following malfunctions could result in a release above the 10 CFR 20 limits if a Gaseous Radwaste System release is in progress?

- a. Waste gas effluent monitor, RE-14, fails LOW.
- b. Waste gas effluent monitor, RE-14, fails HIGH.
- c. Loss of 125 VDC power to radiation trip valve, RV-0014.
- d. Loss of instrument air to radiation trip valve, RV-0014.

ANSWER: 083 (1.00)

a.

REFERENCE:

- 1. VEGP LO-LP-46101-08, pp. 18, & 37, LO 11.
- 2. VEGP Text 17c, pg. 17c-14.
- 3. EQB HNUM 32633, Vogtle 1991-05-31, modified.
- 4. RO Only.
- 5. 000060A205 [3.3/4.2]

000060A205 ..(KA's)

QUESTION: 084 (1.00)

The following plant conditions exist:

- A reactor trip has occurred from 100 percent power.
- Containment low range area monitors 1-RE-0002 and 1-RE-0003 are in alarm.

WHICH ONE (1) of the following describes the cause for these alarms?

- a. A steam line break accident has occurred.
- b. A loss of reactor coolant accident has occurred.
- c. N-16 background in containment has exceeded 10 mrem/hr.
- d. Airborne particulate activity has exceeded 500 micro-curies/cubic meter.

ANSWER: 084 (1.00)

b.

REFERENCE:

1. VEGP 17102-1, rev. 8, pp. 14, & 25.
2. Both RO and SRO.
3. 000061G005 [3.1/3.3]

000061G005 ..(KA's)

QUESTION: 085 (1.00)

The following plant conditions exist:

- Unit 1 is at 100 percent power.
- Pressurizer level control channel selector is in the 459/460 position.
- Pressurizer level transmitter LT-459 fails to 45 percent.

WHICH ONE (1) of the following plant responses occurs FIRST?

- a. Reactor trips on high pressurizer level.
- b. Pressurizer heaters deenergize.
- c. Letdown isolation valve LCV-460 closes.
- d. Regenerative heat exchanger outlet temperature increases.

ANSWER: 085 (1.00)

a.

REFERENCE:

1. VEGP 16302-06-C pg. 16, LO-TP-16302-007.
2. Both RO and SRO.
3. 000028A202 [3.4/3.8]

000028A202 ..(KA's)

QUESTION: 086 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 6.
- Fuel Handling Building Ventilation Isolation has actuated.

WHICH ONE (1) of the following signals could have caused this event?

- a. LOW air flow in the normal fuel handling bldg HVAC.
- b. LOW air flow in the fuel pool area recirculation units.
- c. Spent Fuel Pool cooling temperature equals 132 degrees F.
- d. Fuel Handling Building differential pressure equals 0.30 inches water gauge.

ANSWER: 086 (1.00)

d.

REFERENCE:

1. VEGP Text 24c, rev. 1, pg. 24c-18.
2. VEGP LO-LP-23301-11-C, pg. 10, LO 3.
3. VEGP LO-LP-25102-09-C, pg. 17.
4. EQB HNUM 23656, Vogtle 1991-05-25, modified.
5. Both RO and SRO.
6. 000036K302 [2.9/3.6]

000036K302 ..(KA's)

QUESTION: 087 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power due to a loss of off-site power.
- Diesels start and the sequencers begin loading the diesels.
- 15 seconds after the sequencers start, safety injection is inadvertently actuated.

WHICH ONE (1) of the following explains the subsequent response of the Unit 1 sequencers?

- a. The sequencers will reset immediately and start sequencing the SI loads.
- b. The sequencers will reset in 20 seconds and start sequencing the SI loads.
- c. The sequencers must be reset manually before the SI loads will begin sequencing.
- d. The sequencers will start those SI loads not started previously by the UV sequencer after 20 seconds.

ANSWER: 087 (1.00)

a.

REFERENCE:

1. VEGP LO-LP-28201-13-C, pp. 8, 9, & 11.
2. Both RO and SRO.
3. 000056A247 [3.8/3.9]

000056A247 ..(KA's)

QUESTION: 088 (1.00)

WHICH ONE (1) of the following is the threshold pressure below which the operator is directed by procedure VEGP 18028-C, "Loss of Instrument Air," to trip the reactor if the instrument air pressure is decreasing and can not be restored?

- a. 60 psig.
- b. 70 psig.
- c. 80 psig.
- d. 90 psig.

ANSWER: 088 (1.00)

b.

REFERENCE:

- 1. VEGP 18028-C, rev. 10, pg. 5.
 - 2. RO Only.
 - 3. 000065A206 [3.6/4.2]
- 9-6. 900-P--
000065A206 ..(KA's)

QUESTION: 089 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 5.
- You are performing a valve lineup on the auxiliary feedwater system.
- You find a valve in the closed position that is required to be open.

WHICH ONE (1) of the following actions should be taken per procedure 00308-C, "Independent Verification Policy"?

- a. Inform the Shift Supervisor and reposition the valve as directed.
- b. Attempt to move the valve in the open position to verify position and notify the Shift Supervisor.
- c. Reposition the valve and have the other individual of the two person team perform the verification.
- d. Inform the Shift Supervisor, reposition the valve, and initial BOTH the "Lineup" and "Verification" blank on the valve sheet.

ANSWER: 089 (1.00)

a.

REFERENCE:

1. VEGP LO-LP-63308-08-C, pp. 10, & 11.
2. VEGP 00308-C, rev. 5, pp. 1, 3, 4, 5, & 6.
3. 194001K101 [3.6/3.7]
4. RO Only.

194001K101 ..(KA's)

QUESTION: 090 (1.00)

WHICH ONE (1) of the following is the MAXIMUM allowable time between declaration of emergency and the notification of state and local authorities?

- a. 15 minutes.
- b. 30 minutes.
- c. 45 minutes.
- d. 60 minutes.

ANSWER: 090 (1.00)

a.

REFERENCE:

- 1. VEGP LO-LP-40101-15-C, pg. LO-TP-40101-020, LO 17.
- 2. 194001A116 [3.1/4.2]
- 3. RO Only.

194001A116 ..(KA's)

QUESTION: 091 (1.00)

WHICH ONE (1) of the following describes one requirement at Vogtle for operations log entries?

- a. The last entry for the shift will be "Relieved by _____", followed by the signature of the on-coming person.
- b. A late entry must be made within one (1) hour of the time the event occurred and "Late Entry" or "LE" shall be written next to the entry time.
- c. Action entries shall be noted on the unit status board and logged when plant conditions allow.
- d. Errors in all log entries shall be voided by a single line and initialed by the individual voiding the entry.

ANSWER: 091 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-63501-06, pp. 7, & 8.
2. VEGP 10001 C, pg. 1, 2, 3, & 4.
3. 194001A106 [3.4/3.4]
4. Both FIO and SR0.

194001A106 ..(KA's)

QUESTION: 092 (1.00)

The following plant conditions exist:

- Unit 1 is at 85% power.
- You are the Unit 1 RO.
- The BOP operator is in the Turbine building assisting the TBO.
- You must leave the control room for about 40 minutes to assist on a special task.

WHICH ONE (1) of the following is the minimum relief requirement in order for you to leave?

- a. A brief walkdown of the control board with a qualified RO.
- b. A full shift turnover to another licensed operator on shift.
- c. Have the Unit-2 BOP assume Unit-1 RO responsibilities by obtaining permission from the Unit-1 USS.
- d. A review of data that has been generated since the start of the shift with an RO knowledgeable of plant conditions.

ANSWER: 092 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-63504-08, pg. 9.
2. Vogtle: Exam Bank CL-63, "LO Administrative", Question # 2.13, p. 26.
3. VEGP 10004-C, pg. 3.
4. 194001A106 [3.4/3.4]
5. Both RO and SRO.

194001A106 ..(KA's)

QUESTION: 093 (1.00)

WHICH ONE (1) of the following fire header pressures would cause the FIRST diesel driver fire pump to start automatically?

- a. 85 psig.
- b. 95 psig.
- c. 105 psig.
- d. 110 psig.

ANSWER: 093 (1.00)

b.

REFERENCE:

- 1. VEGP LO-LP-43101-07-C, pg. 33, LO 9.
- 2. RO only.
- 3. 194001K116 [3.5/4.2]

194001K116 ..(KA's)

QUESTION: 094 (1.00)

WHICH ONE (1) of the following individuals is NOT permitted to operate reactor controls under the instruction or supervision of a licensed operator?

- a. A licensed reactor operator whose license has become inactive per the requirements of 10CFR55.
- b. A senior company manager touring the plant under the direct control of a Reactor Operator.
- c. An auxiliary operator enrolled in a current license training course to obtain an operator license.
- d. A licensed reactor operator who recently failed an NRC administered Senior Reactor Operator upgrade examination.

ANSWER: 094 (1.00)

b.

REFERENCE:

1. VEGP 10000-C, Section 3.3.1.4, pg. 15.
2. VEGP LO-LP-63500-12-C, LO 1c, 2c, & 5a.
3. 10 CFR 55.13[a] [2]
4. 194001A109 [2.7/3.9], 194001A103 [2.5/3.4]
5. RO Only.

194001A109 ..(KA's)

QUESTION: 095 (1.00)

WHICH ONE (1) of the following individuals may supplement the Fire Team when necessary?

- a. Shift Supervisor.
- b. Reactor Operator.
- c. Outside Area Operator.
- d. Balance of Plant Operator.

ANSWER: 095 (1.00)

c.

REFERENCE:

1. VEGP 10003-C, rev. 13, pg. 2.
2. 194001K116 [3.5/4.2]
3. Both RO and SRO.

194001K116 ..(KA's)

QUESTION: 096 (1.00)

WHICH ONE (1) of the following represents the point at which MODE 2 is entered from MODE 3 during a reactor startup?

- a. Reactor power reaches 1%.
- b. K-eff is greater than or equal to 1.0.
- c. The first control bank rod is taken off the bottom of the core.
- d. Reactor coolant temperature increases 2 degrees F above the minimum temperature for criticality.

ANSWER: 096 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-39202-06-C, pg. 11, 21.
2. 194001A106 [3.4/3.4]
3. Both RO and SRO.

194001A106 ..(KA's)

QUESTION: 097 (1.00)

WHICH ONE (1) of the following situations is INAPPROPRIATE for marking a procedure step "N/A"?

- a. When the step starts inoperable equipment.
- b. When the marked step results in omission of required work.
- c. When the step covers equipment not being tested at the present time.
- d. When the step is not applicable to the present operating condition.

ANSWER: 097 (1.00)

b.

REFERENCE:

- 1. VEGP, Lesson Plan LO-LP-63054-06-C, pg. 8, LO 1b.
- 2. VEGP 00054-C, rev. 7, pg. 5.
- 3. 194001A102 [4.1/3.9]
- 4. Both RO and SRO.

194001A102 ..(KA's)

QUESTION: 098 (1.00)

WHICH ONE (1) of the following is the MAXIMUM area temperature in which a person can perform a task WITHOUT the approval of the Health Physics Supervisor AND the Unit Shift Supervisor?

- a. 99 degrees F.
- b. 104 degrees F.
- c. 114 degrees F.
- d. 119 degrees F.

ANSWER: 098 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-63303-01, rev. 1, pg. 15, LO 5.
- 2. 194001K108 [3.5/3.4]
- 3. Both RO and SRO.

194001K108 ..(KA's)

QUESTION: 099 (1.00)

WHICH ONE (1) of the following completes the statement?

Emergency maintenance is any activity that...

- a. ...needs to be performed within 24 hours.
- b. ...is critical to the schedule or safety.
- c. ...maintains safe shutdown or operating capability.
- d. ...is performed on equipment that could cause a reactor trip without special precautions being taken.

ANSWER: 099 (1.00)

c.

REFERENCE:

1. VEGP, LO-LP-63350-06-C, pp. 10, & 11.
2. 194001A112 [3.1/4.1]
3. Both RO and SRO.

194001A112 ..(YA's)

QUESTION: 100 (1.00)

WHICH ONE (1) of the following radiological conditions requires posting as HOT SPOT within an RCA?

- a. General reading 5 mrem/hr with contact reading of 50 mrem/hr.
- b. General reading 15 mrem/hr with contact reading of 200 mrem/hr.
- c. General reading 50 mrem/hr with contact reading of 300 mrem/hr.
- d. General reading 300 mrem/hr with contact reading of 1.0 Rem/hr.

ANSWER: 100 (1.00)

c.

REFERENCE:

1. VEGP 00930-C, rev. 6, pg. 2.
 2. VEGP LO-LP-63930, pg. 7, LO 1.
 3. 194001K103 [2.8/3.4]
 4. Both RO and SRO.
- 194001K103 ..(KA's)

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

ANSWER KEY

MULTIPLE CHOICE

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

ANSWER KEY

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

A N S W E R K E Y

- 092 b
- 093 b
- 094 b
- 095 c
- 096 c
- 097 b
- 098 d
- 099 c
- 100 c

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

RO Exam PWR Reactor
Organized by Question Number

<u>QUESTION</u>	<u>VALUE</u>	<u>REFERENCE</u>
001	1.00	8000001
002	1.00	8000002
003	1.00	8000003
004	1.00	8000004
005	1.00	8000005
006	1.00	23521
007	1.00	8000007
008	1.00	8000008
009	1.00	8000009
010	1.00	8000010
011	1.00	8000013
012	1.00	8000093
013	1.00	8000014
014	1.00	8000015
015	1.00	8000017
016	1.00	8000018
017	1.00	8000019
018	1.00	8000020
019	1.00	8000021
020	1.00	8000022
021	1.00	8000023
022	1.00	8000024
023	1.00	8000025
024	1.00	8000026
025	1.00	8000027
026	1.00	8000028
027	1.00	8000030
028	1.00	8000031
029	1.00	8000032
030	1.00	8000033
031	1.00	8000034
032	1.00	8000035
033	1.00	8000037
034	1.00	8000038
035	1.00	8000039
036	1.00	23655
037	1.00	8000029
038	1.00	8000042
039	1.00	8000043
040	1.00	8000044
041	1.00	8000045
042	1.00	8000046
043	1.00	8000047
044	1.00	8000048
045	1.00	8000049
046	1.00	8000040
047	1.00	8000050
048	1.00	8000051
049	1.00	8000052

RO Exam PWR Reactor
Organized by Question Number

<u>QUESTION</u>	<u>VALUE</u>	<u>REFERENCE</u>
050	1.00	8000053
051	1.00	8000056
052	1.00	8000061
053	1.00	8000062
054	1.00	8000065
055	1.00	8000059
056	1.00	8000067
057	1.00	8000068
058	1.00	8000071
059	1.00	8000072
060	1.00	8000069
061	1.00	8000075
062	1.00	8000073
063	1.00	8000074
064	1.00	8000076
065	1.00	8000077
066	1.00	8000082
067	1.00	8000083
068	1.00	8000085
069	1.00	8000066
070	1.00	8000086
071	1.00	8000036
072	1.00	8000087
073	1.00	8000088
074	1.00	8000089
075	1.00	8000091
076	1.00	8000092
077	1.00	8000012
078	1.00	8000094
079	1.00	8000095
080	1.00	8000096
081	1.00	8000098
082	1.00	8000097
083	1.00	8000099
084	1.00	8000100
085	1.00	8000102
086	1.00	8000103
087	1.00	8000104
088	1.00	8000070
089	1.00	8000105
090	1.00	8000110
091	1.00	8000111
092	1.00	8000113
093	1.00	8000115
094	1.00	8000116
095	1.00	8000119
096	1.00	3000121
097	1.00	8000122
098	1.00	8000123

RO Exam PW Reactor
Organized by Question Number

<u>QUESTION</u>	<u>VALUE</u>	<u>REFERENCE</u>
099	1.00	8000124
100	1.00	8000126

	100.00	

	100.00	

R / Exam PWR Reactor
Organized by KA Group

PLANT WIDE GENERICS

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
097	1.00	194001A102
092	1.00	194001A106
091	1.00	194001A106
096	1.00	194001A106
094	1.00	194001A109
099	1.00	194001A112
090	1.00	194001A116
089	1.00	194001K101
100	1.00	194001K103
098	1.00	194001K108
093	1.00	194001K116
095	1.00	194001K116

PWG Total	12.00	

PLANT SYSTEMS

Group I

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
003	1.00	001000G007
001	1.00	001000K402
002	1.00	001050K401
004	1.00	003000K201
008	1.00	004000A401
007	1.00	004020A303
006	1.00	004020A305
009	1.00	013000A301
010	1.00	013000K401
011	1.00	015000K101
012	1.00	015000K103
013	1.00	017020A201
014	1.00	022000A301
015	1.00	056000K103
016	1.00	059000A306
017	1.00	059000K104
020	1.00	061000G007
019	1.00	061000K202
018	1.00	061000K402
021	1.00	068000A302
022	1.00	071000A202
023	1.00	072000K401

PS-I Total	22.00	

RO Exam PWR Reactor
Organized by KA Group

PLANT SYSTEMS

Group II

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
024	1.00	002000K109
025	1.00	006000K404
025	1.00	006030K404
027	1.00	011000A211
028	1.00	011000K512
030	1.00	012000K402
029	1.00	012000K604
031	1.00	014000G008
032	1.00	016000K101
033	1.00	076000G007
034	1.00	029000A301
035	1.00	013000K401
037	1.00	035010A301
036	1.00	035010K403
038	1.00	039000A302
040	1.00	062000A210
039	1.00	062000K201
041	1.00	075000K108
042	1.00	086000G007

PS-II Total	19.00	

Group III

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
044	1.00	005000A405
043	1.00	005000K407
045	1.00	028000G007
046	1.00	034000G009
047	1.00	041020K417
048	1.00	045010K111
049	1.00	076000K402
050	1.00	078000A301

PS-III Total	8.00	

PS Total	49.00	

EMERGENCY PLANT EVOLUTIONS

Group I

R O Exam PWR Reactor
Organized by KA Group

EMERGENCY PLANT EVOLUTIONS

Group I

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
051	1.00	000005A203
005	1.00	000015A122
052	1.00	000015G010
053	1.00	000024A206
054	1.00	000026K303
055	1.00	000027G010
056	1.00	000040A109
057	1.00	000051A202
059	1.00	000055G007
058	1.00	000055K102
060	1.00	000057A220
061	1.00	000067A105
062	1.00	000068A121
063	1.00	000069A201
064	1.00	000074K304
065	1.00	000076A104

EPE-I Total	16.00	

Group II

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
066	1.00	000003G003
067	1.00	000007K301
068	1.00	000008A206
070	1.00	000009K101
069	1.00	000009K308
071	1.00	000011A111
072	1.00	000011K313
073	1.00	000022G011
074	1.00	000025K101
075	1.00	000029K312
076	1.00	000032G010
077	1.00	000033A211
078	1.00	000037K307
079	1.00	000038A136
081	1.00	000054K101
080	1.00	000054K304
082	1.00	000058A203
083	1.00	000060A205
084	1.00	000061G005

EPE-II Total	19.00	

R O Exam PWR Reactor
Organized by KA Group

EMERGENCY PLANT EVOLUTIONS

Group III

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
085	1.00	000028A202
086	1.00	000036K302
087	1.00	000056A247
088	1.00	000065A206

EPE-III Total	4.00	

EPE Total	39.00	

Test Total	100.00	

U. S. NUCLEAR REGULATORY COMMISSION
 SITE SPECIFIC EXAMINATION
 SENIOR REACTOR OPERATOR REQUALIFICATION EXAMINATION
 REGION 2

CANDIDATE'S NAME: MASTER - AS GIVEN
 FACILITY: Vogtle 1 & 2
 REACTOR TYPE: PWR-WEC4
 DATE ADMINISTERED: 91/12/17

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.

<u>TEST VALUE</u>	<u>CANDIDATE'S SCORE</u>	<u>%</u>	
<u>100.00</u>			TOTALS
	<u>FINAL GRADE</u>		

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

 Candidate's Signature

QUESTION: 001 (1.00)

WHICH ONE (1) of the following conditions will generate a Rod Control Urgent Failure alarm?

- a. One rod in control bank D dropping.
- b. One rod control motor generator tripping.
- c. One rod group failing to move when demanded.
- d. One +16.5 VDC power supply being interrupted to the slave cyclor.

ANSWER: 001 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-27101-14-C, pp. 26, & 27.
- 2. VEGP LO-LP-27102-09, pg. 9, 12, & 19, LO 6.
- 3. Both RO and SRO.
- 4. 001050K401 [3.4/3.8]

001050K401 ..(KA's)

QUESTION: 002 (1.00)

WHICH ONE (1) of the following describes a feature of the Reactor Coolant Pump Power supply non-Class 1-E breaker?

- a. It has no closure interlock.
- b. It provides input to the reactor protection system.
- c. It has an 86 lockout relay which is automatically reset.
- d. It is interlocked open when the oil lift pump pressure is less than 600 psig.

ANSWER: 002 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-16401-10 pp. 12, 21, & 22, LO 8.
2. Similar to EQB HNUM 23600, Vogtle 1991-05-30.
3. Both RO and SRO.
4. 003000K201 [3.1/3.1]

003000K201 ..(KA's)

QUESTION: 003 (1.00)

WHICH ONE (1) of the following actions should be performed if the No. 1 seal leakoff to No. 1 Reactor Coolant Pump (RCP) increases to 5.9 gpm?

- a. Increase pressure in the VCT to 30 psig.
- b. Throttle seal injection for No. 1 RCP to 8 gpm.
- c. Shut the No. 1 seal leakoff valve for No. 1 RCP.
- d. Reduce RCS pressure to the range of 2220 and 2235 psig.

ANSWER: 003 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-16401-10 pg. 18
2. Both RO and SRO.
3. 000015A122 [4.1/4.2]

000015A122 ..(KA's)

QUESTION: 004 (1.00)

WHICH ONE (1) of the following satisfies criteria for starting a reactor coolant pump in accordance with EOP 19002-C, "ES-0.2, Natural Circulation Coclown"?

- a. No. 1 seal leakoff - 1.0 gpm.
- b. ACCW RCP CLR LO FLOW annunciator lit.
- c. Seal injection flow to No. 1 RCP - 7.5 gpm.
- d. No. 1 seal differential pressure - greater than 400 psid.

ANSWER: 004 (1.00)

- a. or d.

REFERENCE:

- 1. VEGP LO-LP-16401-10 pg. 17.
- 2. VEGP 19002-C, Attachment A.
- 3. SRO Only.
- 4. 003000K614 [2.6/2.9]

003000K614 ..(KA's)

QUESTION: 005 (1.00)

WHICH ONE (1) of the following describes the eventual result of VCT level channel LC-112 failing HIGH? Assume all controls are in automatic, and NO operator action is taken.

- a. HIGH VCT level and isolation of makeup from the blender.
- b. LOW VCT level and loss of required NPSH to the charging pumps.
- c. HIGH VCT level and continuous makeup from the blender to the VCT.
- d. LOW VCT level and auto swap over of charging pump suction to the RWST.

ANSWER: 005 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-09410-04-C, LO-TP-09401-002
2. VEGP Text 5a, pg. 5a-37.
3. FQB HNUM 23521, Vogtle 1391-05-30.
4. Both RO and SRO.
5. 004020A305 [3.2/3.0]

004020A305 ..(KA's)

QUESTION: 006 (1.00)

The following plant conditions exist:

- One 75 gpm letdown orifice is in service.
- The 45 gpm letdown orifice is in service.
- No. 1 seal leak off is normal for all reactor coolant pumps.
- One centrifugal charging pump is in service.

WHICH ONE (1) of the following values is the expected charging flow rate required to maintain a steady pressurizer level?

- a. 57 gpm.
- b. 87 gpm.
- c. 120 gpm.
- d. 132 gpm.

ANSWER: 006 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-09001-04 pg. 25, LO 7.
2. VEGP Text 5a, pg. 5a-5.
3. Both RO and SRO.
4. 004020A303 [3.4/3.1]

004020A303 ..(KA's)

QUESTION: 007 (1.00)

WHICH ONE (1) of the following conditions will actuate safety injection if the unit is in MODE 1?

- a. Two (2) channels of T-avg reading 540 degrees F.
- b. One (1) steam line has all channels reading 575 psig.
- c. Two (2) channels of containment pressure reading 3.6 psig.
- d. Three (3) channels of pressurizer pressure reading 1875 psig.

ANSWER: 007 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-28103-11-C, pp. 38, & 49.
2. VEGP Text 8a, rev. 1, pp. 8a-72, & 73.
3. Both RO and SRO.
4. 013000A301 [3.7/3.9]

013000A301 ..(KA's)

QUESTION: 008 (1.00)

WHICH ONE (1) of the following conditions is required prior to resetting safety injection following an inadvertent actuation?

- a. Containment Isolation Phase A must be reset.
- b. Any ECCS pumps which started must be stopped.
- c. Both reactor trip breakers and bypass breakers must be open.
- d. Less than 60 seconds must have elapsed since SI was activated.

ANSWER: 008 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-28103-11-C, pp. 7, 23, & 54.
- 2. EQB HNUM 19104, Vogtle 1990-06-25, modified.
- 3. Both RO and SRO.
- 4. 013000K401 [3.9/4.3]

013000K401 ..(KA's)

QUESTION: 009 (1.00)

WHICH ONE (1) of the following failures will cause the set point for the rod insertion limit to INCREASE?

- a. T-hot transmitter TE-411A fails LOW.
- b. T-cold transmitter TE-411B fails LOW.
- c. Turbine impulse pressure channel PT-505 fails HIGH.
- d. Power range nuclear instrument channel N-41 fails HIGH.

ANSWER: 009 (1.00)

b.

REFERENCE:

1. VEGP Text 6, pp. 6a-24, & 25.
2. VEGP drwg. 1X4DB113.
3. VEGP Logic Fig. 7.2.1-1, shts. 9, & 16.
4. SRO Only.
5. 014000G012 [2.9/3.1]

014000G012 ..(KA's)

QUESTION: 010 (1.00)

WHICH ONE (1) of the following conditions will cause a "ROD DEVIATION/RADIAL TILT" alarm during a rod withdrawal?

- a. Central control card failure.
- b. Control Bank B moving before Control Bank A.
- c. 12-step difference between any two control banks.
- d. Shut down bank rod less than 228 steps after reaching 100 percent power.

ANSWER: 010 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-27201-07, pp. 13, & 14, LO 7f.
2. EQB HNUM 23603, Vogtle 1991-05-31, modified.
3. Both RO and SRO.
4. 014000G008 [2.9/3.1]

014000G008 ..(KA's)

QUESTION: 011 (1.00)

WHICH ONE (1) of the following describes an effect of power range channel N-42 upper detector failing HIGH?

- a. Reactor trips on high flux.
- b. Main feed regulating valves open.
- c. Control rods step out to high bank rod stop.
- d. OT delta T setpoint for one channel decreases.

ANSWER: 011 (1.00)

d.

REFERENCE:

1. NRC Sys. Man. PWR Westinghouse Chapt 12, rev. 1287, pp. 12-11, & 12-13.
2. VEGP Text 3c, rev. 5, pp. 3c-20, 21, & Fig. 3C-1, Text 8a, rev. 1, pg. 8a-24, Text 13a, rev. 9, pg. 13a-62.
3. VEGP LO-LP-28103-11-C, pg. 42, LO 4g2c.
4. Both RO and SRO.
5. 015000K101 [4.1/4.2]

015000K101 ..(KA's)

QUESTION 012 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 2 at 1 percent power.
- Intermediate range instrument N-35 indicates 23 percent equivalent ion chamber amps.
- NIS HI FLUX IR REACTOR TRIP annunciator is NOT lit.
- Except as noted all plant equipment is operating normally.

WHICH ONE (1) of the following conditions is also consistent with these indications?

- a. Control rods fail to move outward in manual.
- b. Source range nuclear instrument detectors energize.
- c. INTMD RANGE COMP VOLTAGE FAILURE annunciator is lit.
- d. NIS HI FLUX LO SET POINT PWR RNG RX TRP annunciator is lit.

ANSWER: 012 (1.00)

a.

REFERENCE:

1. VEGP 17009-1, rev. 4, pg. 18.
2. VEGP 17010-1, rev. 15, pg. 40.
3. VEGP LO-LP-60302-03, pg. 9.
4. VEGP Text 6a, rev. 3, pg. 6a-25.
5. VEGP logics, Fig. 7.2.1-1, shts. 3, & 4.
6. Both RO and SRO.
7. 015000K103 [3.1/3.1]

015000K103 ..(KA's)

QUESTION: 013 (1.00)

WHICH ONE (1) of the following will cause incore thermocouples to read HIGH?

- a. Broken junction weld at the detector.
- b. Breakdown of thermocouple wire insulation.
- c. Short circuit between detector wires at the junction box.
- d. Open circuit in the plant computer RTD in the reference junction box.

ANSWER: 013 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-36102-04-C, pp. 14, 19, & 20, LO 7.
- 2. 017020A201 [3.1/3.5]
- 3. Both RO and SRO.

017020A201 ..(KA's)

QUESTION: 014 (1.00)

WHICH ONE (1) of the following reflects the position of containment spray components if three (3) containment pressure channels indicate 22 psig?

- a. RWST isolation valves - closed.
- b. Spray additive isolation valves - closed.
- c. Containment sump isolation valves - open.
- d. Spray header isolation valves - open.

ANSWER: 014 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-15101-09, pp. 12, 17, & LO-TP-15101-003.
2. VEGP Text 9b, rev. 7, pg. 9b-11.
3. SRO Only.
4. 026000A301 [4.3/4.5]

026000A301 ..(KA's)

QUESTION: 015 (1.00)

WHICH ONE (1) of the following conditions will automatically start a standby condensate pump?

- a. Condensate pump suction pressure at 20 inches Hg.
- b. Condensate pump discharge pressure at 650 psig.
- c. Main feed water pump suction pressure at 250 psig.
- d. Main feed water pump discharge pressure at 1250 psig.

ANSWER: 15 (1.00)

c.

REFERENCE:

1. VEGP Text 13a, rev. 9, pp. 13a-49, & 65.
2. Both RO and SRG.
3. 056000K103 [2.6/2.6]

056000K103 ..(KA's)

QUESTION: 016 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power.
- Two (2) steam generators indicate narrow range levels of 73 percent.
- Three (3) RCS loop T-avg instruments indicate 552 degrees F.

WHICH ONE (1) of the following automatic actions should have occurred?

- a. Main condensate pumps trip.
- b. Main feed water pumps trip.
- c. Main feed water isolation valves close.
- d. Main feed pump discharge isolation valves close.

ANSWER: 016 (1.00)

c.

REFERENCE:

1. VFGP Text 8a, rev. 1, pp. 8a-30, & 74, Text 13a, rev. 9, pg. 13a-54.
2. VFGP LO-LP-18201-11-C, pp. 16, & 19.
3. Both RO and SRO.
4. 059000/306 [3.2/3.3]

059000A306 ..(KA's)

QUESTION: G.7 (1.00)

The following plant conditions exist.

- Unit 1 is at 12 percent power.
- Steam Generator Water Level controls are in automatic.

WHICH ONE (1) of the following failures will cause the bypass feed regulating valve to for SG-1 to OPEN?

- a. Nuclear instrument channel N-44 fails HIGH.
- b. No. 1 SG controlling level instrument LT-519 fails LOW.
- c. No. 1 SG controlling feed flow instrument FT-510 fails LOW.
- d. No. 1 SG controlling steam flow instrument FT-512 fails HIGH.

ANSWER: 017 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-18501-08-C, pp. 26, LO-TP-18501-003, & 004.
2. VEGP Text 13a, rev. 9, pp. 13a-26, 48, & 62.
3. Both RO and SRO.
4. 059000K104 [3.4/3.4]

059000K104 ..(KA's)

QUESTION: 018 (1.00)

WHICH ONE (1) of the following conditions will start both motor driven AND the turbine driven auxiliary feed water pumps?

- a. Both steam generator feed pumps trip.
- b. Three (3) pressurizer pressure channels reading 1750 psig.
- c. Three (3) controlling feedwater flow channels at 19 percent and both turbine impulse pressure channels at 45 percent.
- d. Three (3) NR steam generator level channels for SG-4 at 17 percent and both turbine impulse pressure channels at 45 percent.

ANSWER: 018 (1.00)

c.

REFERENCE:

- 1. VEGP Logics, Fig. 7.2.1-1, shts. 7, 15, & 16.
- 2. VEGP LO-LP-20101-15-C, pp. 56, & 57.
- 3. VEGP LO-LP-28103-11-C, pg. 35, LO 1.
- 4. Both RO and SRO.
- 5. 061000K402 [4.5/4.6]

061000K402 ..(KA's)

QUESTION: 019 (1.00)

WHICH ONE (1) of the following describes the impact on the gaseous waste processing system if the detector for the waste gas discharge monitor (RE-14) fails LOW during a waste gas release?

- a. ERF display for RE-14 changes to magenta.
- b. Aux Bldg continuous exhaust shifts to the equipment bldg stack.
- c. Gaseous waste discharge trip valve (RV-14) will close automatically.
- d. Waste gas compressors will start returning the discharge stream to the selected gas decay tank.

ANSWER: 019 (1.00)

a.

REFERENCE:

- 1. VEGP Text 17c, rev. 5, pp. 17c-21, & 24.
- 2. Both RO and SRO.
- 3. 071000A202 [3.3/3.6]

071000A202 ..(KA's)

QUESTION: 020 (1.00)

WHICH ONE (1) of the following indicates a condition that will initiate a containment ventilation isolation?

- a. INTMD RADIATION ALARM annunciator lit.
- b. BYPASS CNMT VENT ISO HI RAD TEST annunciator lit.
- c. One manual containment spray switch in the actuation position.
- d. Loss of power to Containment Low Range radiation monitor RE-0003.

ANSWER: 020 (1.00)

d.

REFERENCE:

1. EQB HNUM 19115, Vogtle 1990-06-25, modified.
2. VEGP LO-LP-32101-13-C, pp. 19, & 20.
3. VEGP Text 11a, rev. 7, pg. 11a-30.
4. VEGP 17005-1, rev. 12, pp. 8, & 13.
5. VEGP LO-LP-29160-07, pg. 10.
6. Both RO and SRO.
7. 072000K401 [3.3/3.6]

072000K401 ..(KA's)

QUESTION: 021 (1.00)

WHICH ONE (1) of the following RCP pump combinations will result in loss of all normal pressurizer sprays if deenergized?

- a. RCP 1 and RCP 2.
- b. RCP 2 and RCP 3.
- c. RCP 3 and RCP 4.
- d. RCP 4 and RCP 1.

ANSWER: 021 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-16001-09, pg. 14.
2. VEGP Text, rev. 6, pg. 1c-4.
3. Both RO and SRO.
4. 002000K109 [4.1/4.1]

002000K109 ..(KA's)

QUESTION: 022 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 2.
- Accumulator isolation valves are closed.
- Power is available to the accumulator isolation valves.

WHICH ONE (1) of the following conditions would cause an accumulator isolation valve to open automatically?

- a. One (1) containment pressure channels reading 20 psig.
- b. Two (2) containment pressure channels reading 5.1 psig.
- c. Two (2) pressurizer pressure channels reading 1925 psig.
- d. Three (3) pressurizer pressure channels reading 1975 psig.

ANSWER: 022 (1.00)

b. or d.

REFERENCE:

1. VEGP LO-LP-13401-10-C, pp. 9, & 10, LO 4.
2. VEGP LO-LP-28103-11-C, pg. 38.
3. VEGP Text 92, rev. 4, pg. 9a-i7.
4. Both RO and SRO.
5. 006030K404 [3.9/4.1]

006030K404 ..(KA's)

QUESTION: 023 (1.00)

WHICH ONE (1) of the following describes the flowpath of the RHR system during Hot Leg Recirculation?

- a. Water from the RCS hot legs is pumped by the RHR pumps through the RHR heat exchangers and returned to all four RCS cold legs.
- b. Water from the RCS hot legs is pumped by both RHR pumps through the RHR heat exchanger bypasses and then to all four RCS hot legs.
- c. Water from the containment emergency sumps is pumped by the RHR pumps through the RHR heat exchangers and then to the RCS hot legs 1 and 4.
- d. Water from the containment emergency sumps is pumped by both RHR pumps through the RHR heat exchanger bypass piping and then to the RCS hot legs 1 and 4.

ANSWER: 023 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-13301-06-C, pp. 16, & 17.
- 2. EQB HNUM 23673, Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 006030K403 [3.4/3.6]

006030K403 ..(KA's)

QUESTION: 024 (1.00)

The following plant conditions exist:

- Unit 1 is at 100 percent power.
- Pressurizer level channel selector switch is in the "459/460" position.

WHICH ONE (1) of the following describes the effect of level transmitter LT-460 failing LOW? Assume NO operator action is taken.

- a. LV-459, LV-460 and the three (3) orifice isolation valves close.
- b. LT-459 automatically takes control and level stabilizes at program value.
- c. LV-460 and the three (3) orifice isolation valves close, LV-459 remains open.
- d. LT-459 automatically takes control and the level stabilizes at the manually selected value.

ANSWER: 024 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-16302-06-C pp. 15, LO-TP-16302-004, 005, & 007.
2. VEGP Logics, Fig. 7.2.1-1, sht. 20.
3. Both RO and SRO.
4. 011000A211 [3.4/3.6]

011000A211 ..(KA's)

QUESTION: 025 (1.00)

The following plant conditions exist:

- Unit 2 is in MODE 2.
- One (1) of the two switches for the Source Range Block permissive at P-6 has been placed in "BLOCK" momentarily.
- Power level is increasing toward the point of adding heat.

WHICH ONE (1) of the following describes the effect this alignment will have on plant equipment operations?

- a. A Source Range high flux trip will occur.
- b. One Source Range detector will be damaged.
- c. An Intermediate Range high flux trip will occur.
- d. Both Source Range detectors will become saturated.

ANSWER: 025 (1.00)

a.

REFERENCE:

1. VEGP LO-LP-28103-11-C, pg. 14.
2. EQB HNUM 23612, Vogtle 1991-05-31, modified.
3. Both RO and SRO.
4. 012000K604 [3.3/3.6]

012000K604 ..(KA's)

QUESTION: 026 (1.00)

WHICH ONE (1) of the following reactor trips is based on preventing departure from nucleate boiling?

- a. Pressurizer high pressure.
- b. Steam generator low-low level.
- c. Power range flux negative rate.
- d. Power range high flux high set point.

ANSWER: 026 (1.00)

c.

REFERENCE:

- 1. VEGP 10-LP-28103-11-C, pp. 15, 16, & 17.
- 2. Both SRO and SRO.
- 3. 012000K402 [3.9/4.3]

012000K402 ..(KA's)

QUESTION: 027 (1.00)

WHICH ONE (1) of the following sets of pressure instruments provide cold over pressure protection for the reactor coolant system?

- a. Wide range transmitter PT-403 and PT-405 from loops 1 and 4.
- b. Wide range transmitter PT-404 and PT-406 from loops 2 and 3.
- c. Pressurizer pressure channels I and III, PT-455 and PT-457.
- d. Pressurizer pressure channels II and IV, PT-456 and PT-458.

ANSWER: 027 (1.00)

a.

REFERENCE:

1. VEGP Text 1a, rev. 6, pg. 1a-21.
2. VEGP Logic Fig. 7.2.1-1, sht. 6, rev. 8.
3. Both RO and SRO.
4. 016000K101 [3.4/3.4]

016000K101 ..(KA's)

QUESTION: 028 (1.00)

WHICH ONE (1) of the following describes the response of the containment purge system to a phase A containment isolation? Assume that the line ups are normal for MODE 1.

- a. Mini-purge fans start.
- b. Normal purge fan starts.
- c. Mini-purge valves, AOV-2627B, and 2629B close.
- d. Normal purge valves, MOV-2626A and 2628B, close.

ANSWER: 028 (1.00)

c.

REFERENCE:

1. VEGP Text 24f, rev. 5, pp. 24f-19, & 22, Fig. 24f-2.
2. Both RO and SRO.
3. 029000A301 [3.8/4.0]

029000A301 ..(KA's)

QUESTION: 029 (1.00)

WHICH ONE (1) of the following is the preferred (normal) source of make-up to the spent fuel pool to replace evaporative losses?

- a. Boron recycle system.
- b. Demineralized Water System.
- c. Refueling Water Storage Tank.
- d. Reactor Makeup Water Storage Tank.

ANSWER: 029 (1.00)

b.

REFERENCE:

- 1. VEGP LO-LP-25102-09-C, pg. 10.
- 2. VEGP Text 18b, rev. 2, pg. 18b-6.
- 3. EQB HNUM 23613, Yngtle 1991-05-31, modified.
- 4. Both RO and SRO.
- 5. 033000K401 [2.9/3.2]

033000K401 ..(KA's)

QUESTION: 030 (1.00)

WHICH ONE (1) of the following fuel handling components or functions is controlled at the containment building console?

- a. Crane interlock bypass.
- b. Bridge interlock bypass.
- c. Enable fuel transfer cart movement.
- d. Operate fuel transfer tube isolation valve.

ANSWER: 030 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-25101-11-C, pp. 59, & 60, LO Pa, & b.
2. Both RO and SRO.
3. 034000G009 [3.0/3.0]

034000G009 ..(KA's)

QUESTION: 031 (1.00)

WHICH ONE (1) of the following signals will cause the Steam Generator Blowdown sample isolation valves to automatically close?

- a. Feedwater isolation signal.
- b. Motor driven AFW auto start signal.
- c. Containment isolation phase A signal.
- d. RE-0021 steam generator blowdown high radiation signal.

ANSWER: 031 (1.00)

b.

REFERENCE:

1. VEGP LO-LP 24101-10, pg. 19.
2. EQB HNUM 23655, Vogtle 1991-05-31.
3. Both RO and SPO.
4. 035010K403 [2.6/2.8]

035010K403 ..(KA's)

QUESTION: 032 (1.00)

The following plant conditions exist:

- Unit 1 is at 65 percent power.
- Steam generator water level control is in automatic.
- No. 1 SG steam flow selector is in the 512 position.
- The associated steam pressure transmitter PT-514 fails HIGH.

WHICH ONE (1) of the following describes system response to this failure?

- a. Main feed water pumps reduce speed.
- b. Main feedwater regulating valves throttle open.
- c. SG 1 atmospheric relief valve opens on HIGH SG pressure.
- d. Reactor trip breakers open on HIGH steam generator water level.

ANSWER: 032 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-18501-08-C, pg. 24, LO 10.
2. VEGP Text, rev. 9, Fig. 13a-25.
3. VEGP Drwg. 1X4DB168-3, rev. 21.
4. Both RO and SRG.
5. 035010A301 [4.1/3.9]

035010A301 ..(KA's)

QUESTION: 033 (1.00)

WHICH ONE (1) of the following will generate a main steam line isolation WITHOUT generating a safety injection signal?

- a. Pressure in No. 2 steam line reading 550 psig.
- b. Two (2) containment pressure channels reading 16 psig.
- c. Three (3) pressurizer pressure channels reading 1850 psig.
- d. Pressure in No. 3 steam line has decreased 200 psig in the last minute with low pressure steamline isolation BLOCKED.

ANSWER: 033 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-21102-12-C, pg. 22, LO 15.
- 2. VEGP Text 8a, rev. 1, pp. 8a-28, 29, 30, & 31.
- 3. Both RO and SRO.
- 4. 039000A302 [3.1/3.5]

039000A302 ..(KA's)

QUESTION: 034 (1.00)

WHICH ONE (1) of the following is powered from a 4160 VAC bus?

- a. Condensate pumps.
- b. Heater drain pumps.
- c. Electric steam boiler.
- d. Circulating water pumps.

ANSWER: 034 (1.00)

b.

REFERENCE:

1. VEGP drwg 1X3D-AA-A01A rev. 16, & 1X3D-AA-D04A rev. 8.
2. Both RO and SRO.
3. 062000K201 [3.3/3.4]

062000K201 ..(KA's)

QUESTION: 035 (1.00)

WHICH ONE (1) of the following systems is the preferred alternative source of water for the nuclear service cooling towers if the nuclear service cooling tower make up pumps are not serviceable?

- a. Potable water.
- b. Utility water.
- c. Circulating water.
- d. River make up water.

ANSWER: 035 (1.00)

d.

REFERENCE:

1. VEGP Text 10h, rev. 3, pg. 10h-2, Text 10j, rev. 4, Fig. 10j-1.
2. Both RO and SRO.
3. 075000K108 [3.2/3.2]

075000K108 ..(KA's)

QUESTION: 036 (1.00)

WHICH ONE (1) of the following is a function of the Local Suppression Indicating Panels of the Fire Detection System?

- a. Provides readout of fire system instrumentation in the control room.
- b. Monitors fire detectors, processes trouble signals, and generates alarms.
- c. Provides signals to actuate fire protection systems and monitors fire protection system status.
- d. Monitors status of which detectors in a zone are in an alarm condition when a zone contains many detectors.

ANSWER: 036 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-22101-04-C, pp. 7, & 8.
- 2. EQB HNUM 23659, Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 086000G007 [3.0/3.2]

086000G007 ..(KA's)

QUESTION: 037 (1.00)

WHICH ONE (1) of the following conditions satisfies one of the opening criteria for the "A" train Residual Heat Removal System loop suction isolation valves, HV-8701A and HV-8701B?

- a. RWST suction valve 8812B is closed.
- b. Charging pump suction 8804A is closed.
- c. Wide range RCS pressure equals 380 psig.
- d. Safety injection suction valve 8804B is open.

ANSWER: 037 (1.00)

b.

REFERENCE:

1. VEGP Text 10a, rev. 7, pg. 10a-16.
2. Both RO and SRO.
3. 005000K407 [3.2/3.5]

005000K407 ..(KA's)

QUESTION: 038 (1.00)

WHICH ONE (1) of the following conditions will partially satisfy criteria for arming the steam dumps?

- a. Reactor trip breakers are open.
- b. Impulse pressure channel PT-505 failed LOW.
- c. Impulse pressure channel PT-506 failed HIGH.
- d. Two (2) RCS loop temperature channels reading 548 degrees F.

ANSWER: 038 (1.00)

a.

REFERENCE:

1. VEGP Text 8a, rev. 1, pp. 8a-39, & 42, Text 12b, rev. 4, pg. 12b-16.
2. Both RO and SRO.
3. 041020K417 [3.7/3.9]

041020K417 ..(KA's)

QUESTION: 039 (1.00)

WHICH ONE (1) of the following sets of turbine steam valves will ONLY close automatically as the result of a turbine trip?

- a. Turbine control valves.
- b. Intermediate stop valves.
- c. Modulated intercept valves.
- d. Non-modulated intercept valves.

ANSWER: 039 (1.00)

b.

REFERENCE:

1. VEGP Text 14a, rev. 6, pp. 14a-4, & 5.
2. Both RO and SRO.
3. 045000K111 [3.6/3.7]

045010K111 ..(KA's)

QUESTION: 040 (1.00)

The following plant conditions exist:

- All plant systems are operating as designed.
- Nuclear Service Cooling Water (NSCW) pumps 1 and 3 are operating in train "A".

WHICH ONE (1) of the following describes the system response if the No. 1 NSCW pump trips?

- a. NSCW pump 2 starts immediately.
- b. Discharge valve for NSCW pump 5 opens in 40 to 45 seconds.
- c. NSCW pump 2 starts when its discharge valve is full open.
- d. Tower bypass/return valves stroke closed to maintain system pressure.

ANSWER: 040 (1.00)

b.

REFERENCE:

1. VEGP Text 10d, rev. 7, pg. 10d-13.
2. VEGP LO-LP-06101-18-C, pg. 32, LO 10 & 12.
3. Both RO and SRO.
4. 076000K402 [2.9/3.2]

076000K402 ..(K/s)

QUESTION: 041 (1.00)

WHICH ONE (1) of the following describes an effect associated with a continuous rod withdrawal event from 100 percent power?

- a. Charging flow increases.
- b. Delta-flux becomes less negative.
- c. Pressurizer pressure remains constant.
- d. Delta-T seeks a higher equilibrium level.

ANSWER: 041 (1.00)

b.

REFERENCE:

- 1. VEGP LO-LP-60303-11-C, pg. 31, LO 9.
- 2. SRO Only.
- 3. 000001K107 [3.5/3.8]

000001K107 ..(KA's)

QUESTION: 042 (1.00)

WHICH ONE (1) of the following failures will cause automatic rod withdrawal?
Assume NO operator action is taken.

- a. T-avg fails HIGH.
- b. Rod control urgent failure.
- c. A power range NI fails HIGH.
- d. First stage turbine pressure fails HIGH.

ANSWER: 042 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-27101-14-C, pg. LO-TP-27101-004.
2. SRO Only.
3. 000001K105 [3.5/3.8]

000001K105 ..(KA's)

QUESTION: 043 (1.00)

WHICH ONE (1) of the following explains the reason for consulting Reactor Engineering prior to recovery of a dropped rod?

- a. Uneven core burn up may cause a revision of the AFD limits.
- b. Xenon transients following recovery may cause localized flux peaking.
- c. Power peaking next to a dropped rod may have exceeded core thermal limits.
- d. Radial flux deviation measurements must be taken for the Cycle Operating Limits Report.

ANSWER: 043 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-60303-1i-C, pp. 29, & 30.
2. VEGP Text 6a, rev. 3, Fig. 6-26.
3. SRO Only.
4. 000003K304 [3.8/4.1]

000003K304 ..(KA's)

QUESTION: 044 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power.
- EOP 19000-C, "E-0, Reactor Trip or Safety Injection," was entered and a transition to EOP 19001-C, "ES-0.1, Reactor Trip Response," was made.
- Digital rod position indicator shows Rods P-4 and B-12 at 228 steps, and Rod D-12 at 200 steps.

WHICH ONE (1) of the following actions is required per EOP-19001, "ES-0.1"?

- a. Emergency borate 104 ppm total.
- b. Emergency borate 312 ppm total.
- c. Manually drive the stuck rods to the bottom.
- d. Notify Reactor Engineering to run incore flux maps.

ANSWER: 044 (1.00)

b.

REFERENCE:

1. VEGP 19001-C (ES-0.1), rev. 11, pg. 3.
2. VEGP Text 6a, rev. 3, Fig. 6-26.
3. Both RO and SRO.
4. 000005A203 [3.5/4.4]

000005A203 ..(KA's)

QUESTION: 045 (1.00)

The following plant conditions exist:

- A large break LOCA has occurred on Unit 1.
- RWST level is at 9 percent.

WHICH ONE (1) of the following describes the action that should occur as a result of this RWST level?

- a. RWST to Emergency Sump semi-automatic swapover.
- b. RWST isolation valves are closed automatically.
- c. Spray additive isolation valves are manually closed.
- d. Containment emergency sump pumps start automatically.

ANSWER: 045 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-15101-09, pg. 7, LO 8.
2. Both RO and SRO.
3. 000011A111 [4.2/4.2]

000011A111 ..(KA's)

QUESTION: 046 (1.00)

The following plant conditions exist:

- Reactor trip has occurred.
- Pressurizer pressure is at 1600 psig and dropping rapidly

WHICH ONE (1) of the following conditions satisfy criteria for tripping all of the reactor coolant pumps?

- a. One AFW pump running, RCS pressure at 1360 psig.
- b. One CCP pump running, RCS pressure at 1370 psig.
- c. Two SI pumps running, RCS pressure at 1380 psig.
- d. Two RHR pumps running, RCS pressure at 1390 psig.

ANSWER: 046 (1.00)

b.

REFERENCE:

1. VEGP 19000-C, rev. 11, Foldout page.
2. SRO Only.
3. 000011A103 [4.0/4.0]

000011A103 ..(KA's)

QUESTION: 047 (1.00)

The following plant conditions exist:

- Unit 2 is at 45 percent power.
- RCP TRIP annunciator lit.
- RCP LOOP 3 LOW FLOW ALERT annunciator lit.
- LOOP 3 RTD BYPASS LO FLOW annunciator lit.

WHICH ONE (1) of the following actions is an IMMEDIATE ACTION for this event per VEGP 18005-C, "Partial Loss of Flow"?

- a. Verify No. 3 steam generator level is trending to 50 percent.
- b. Verify No. 3 steam generator level is trending to 65 percent.
- c. Verify Nos. 1, 2, and 4 steam generator levels are between 45 and 55 percent.
- d. Verify Nos. 1, 2, and 4 steam generator levels are between 60 and 70 percent.

ANSWER: 047 (1.00)

b.

REFERENCE:

1. VEGP 18005-C, rev. 5, pp. 1, & 2.
2. Both RO and SRO.
3. 000015G010 [3.4/3.4]

000015G010 ..(KA's)

QUESTION: 048 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power due to a loss of off-site power.
- All but 3 rod bottom lights are lit.
- 3 control rods are at 224 steps.
- A and B emergency diesel generators are running and loaded.
- A and B charging pumps are running.
- Operators are in EOP 19001-C, "ES-0.1, Reactor Trip Response."

WHICH ONE (1) of the following is the required operator action to ensure adequate shutdown margin for this event?

- a. Open RWST isolation valves 1 LV-0112D and 1-LV-0112E
- b. Manually control VCT level between 30 and 50 percent.
- c. Place the blender control switch to the AUTO position.
- d. Start one (1) Reactor Make Up pump and reset the Boric Acid Blend Control, 1-FQ1-0111.

ANSWER: 048 (1.00)

a.

REFERENCE:

1. VEGP 13009-9, rev. 8, pp. 5, & 13.
2. VEGP 199001-C, rev. 11, pg. 3.
3. Both RO and SRO.
4. 000024A206 [3.6/3.7]

000024A206 ..(KA's)

QUESTION: 049 (1.00)

WHICH ONE (1) of the following conditions require an emergency boration?

- a. Control rod bank D stepping out without an apparent cause while in MODE 1.
- b. SOURCE RANGE HIGH FLUX AT SHUT DOWN annunciator in alarm while in MODE 3.
- c. Reactor Engineering reports that the shutdown margin equals 1.3 % delta k/k while in MODE 1.
- d. Power range instruments indicate that fission power has doubled in the past three minutes while in MODE 2.

ANSWER: 049 (1.00)

b.

REFERENCE:

- 1. VEGP 170(0-1) rev. 15, pp. 17, & 18.
- 2. VEGP C/R Rev. 1, cycle 3, pg. 2.
- 3. VEGP Rev. 1, sec 3.1.1.1.
- 4. VEGP LO 1 Rev. 02-03-C, pp. 17, & 21, LO 1a3.
- 5. SRO Only.
- 6. 000024K301 [4.1/4.4]

000024K301 ..(KA's)

QUESTION: 050 (1.00)

The following plant conditions exist:

- Unit 2 is in MODE 6.
- Reactor water level is 22 feet above the flange.
- RHR pump A is operating.
- CCW TRAIN A LO HDR PRESS annunciator lit.
- CCW TRAIN A LO FLOW annunciator lit.
- CCW TRAIN A RHR PMP SEAL LOW FLOW annunciator lit.
- CCW TRAIN A RHR HX LO FLOW annunciator lit.

WHICH ONE (1) of the following is a required action for these conditions?

- a. Reduce level in the Train B CCW surge tank to 35 percent.
- b. Increase level in the Train B CCW surge tank to 65 percent.
- c. Reduce the reactor water level to 21 feet above the flange.
- d. Increase the reactor water level to 23 feet above the flange.

ANSWER: 050 (1.00)

d.

REFERENCE:

1. VEGP Tech Spec 3.9.8.2.
2. VEGP 18020-C, rev. 5, pg. 1, & 2.
3. SRO Only.
4. 000026G003 [3.1/3.6]

000026G003 ..(KA's)

QUESTION: 051 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 1.
- ACCW LO HDR PRESS annunciator lit.
- ACCW RCP 3 CLR LO FLOW annunciator lit.
- ACCW RCP 3 CLR OUTLET HI TEMP annunciator lit.
- ACCW RTN HDR FROM RCP LO FLOW annunciator lit.

WHICH ONE (1) of the following conditions satisfy criteria for tripping the reactor coolant pumps according to VEGP 18022-C "Loss of Auxiliary Component Cooling Water"?

- a. Seal water outlet temperature at 220 degrees F.
- b. Motor stator winding temperature at 220 degrees F.
- c. Motor lower radial bearing temperature at 220 degrees F.
- d. Pump lower seal water bearing temperature at 220 degrees F.

ANSWER: 051 (1.00)

c.

REFERENCE:

1. VEGP 18022-C, rev. 5, pg. 4.
2. Both RO and SRO.
3. 000026K303 [4.0/4.2]

000026K303 ..(KA's)

QUESTION: 052 (1.00)

WHICH ONE (1) of the following conditions will NOT satisfy the criteria for returning to the procedure and step in effect from EOP-19211-C "FR-S.1 Response to Nuclear Power Generation/ATWT," Step 4?

- a. All power range channels indicate 0 percent power AND both intermediate rate meters indicate +1.0 dpm.
- b. All power range channels indicate 1 percent power AND both intermediate range rate meters indicates zero dpm.
- c. All power range channels indicate 4 percent power AND both intermediate range rate meter. indicate zero dpm.
- d. All power range channels indicate 5 percent power AND both intermediate range rate meters indicate -.20 dpm.

ANSWER: 052 (1.00)

a.

REFERENCE:

- 1. VEGP Text 3b, rev. 3, Fig. 3b-1, Text 3c, rev. 5, Fig. 3c-6.
- 2. VEGP LO-LP-37041-05-C, pg. 14, LO 9.
- 3. VEGP 19211-C, rev. 6, pp. 2 & 7.
- 4. SRO Only.
- 5. 000029G012 [4.1/4.2]

000029G012 ..(KA's)

QUESTION: 053 (1.00)

WHICH ONE (1) 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. Prevents the PRT rupture disc from bursting due to a PORV lifting.
- b. Ensures that the injection rate of boric acid into the core is sufficient.
- c. Ensures that the PORV's are operating properly to prevent the core safety valves from lifting.
- d. Prevents the PORVs from opening and diverting a portion of the full flow of boric acid from the core.

ANSWER: 053 (1.00)

b.

REFERENCE:

- 1. VEGP 19211-C, rev. 6, pg. 3.
- 2. VEGP LO-LP-37041-05-C, pg. 13, LO 7.
- 3. EQB HNUM 19147, Vogtle 1990-06-25, modified.
- 4. Both RO and SRO.
- 5. 000029K312 [3.4/4.7]

000029K312 ..(KA's)

QUESTION: 054 (1.00)

The following plant conditions exist:

- Unit 1 is at 45 percent power.
- TURB CNDSR LO VAC annunciator lit.
- Condenser vacuum reads 20.5 inches Hg.

WHICH ONE (1) of the following should have occurred?

- a. Turbine run back.
- b. Turbine trip only.
- c. Reactor trip initiating a turbine trip.
- d. Turbine trip initiating a reactor trip.

ANSWER: 054 (1.00)

b.

REFERENCE:

1. VEGP 17019-1, rev. 8, pp. 11, & 19.
2. Both RO and SRO.
3. 000051A202 [3.9/4.1]

000051A202 ..(KA's)

QUESTION: 055 (1.00)

The following plant conditions exist:

- Off site power is lost.
- Emergency diesel generators fail to start.
- RCS pressure is 1500 psig.

WHICH ONE (1) of the following is a concern regarding the plant cooldown performed in EOP 19100-C, "ECA-0.0, Loss of All AC"?

- a. Mixing of injected boron is poor during the cooldown.
- b. Accumulator injection will cause counter flow forces.
- c. Reactor outlet temperatures approximate steam generator temperatures.
- d. Positive reactivity is added during steam generator depressurization.

ANSWER: 055 (1.00)

d.

REFERENCE:

1. VEGP 19002-C, rev. 8, pg. 2.
2. VEGP 19100-C, rev. 7, pg. 21.
3. VEGP LO-LP-37031-07-C, pg. 14, LO 5.
4. Both RO and SRO.
5. 000055K102 [4.1/4.4]

000055K102 ..(KA's)

QUESTION: 056 (1.00)

WHICH ONE (1) of the following is intended to preserve battery life according to VEGP 19100-C, "ECA-0.0, Loss of All AC Power"?

- a. Dump steam using PV-3000.
- b. Place RHR pumps in pull to lock.
- c. Open only one AFW valve at a time.
- d. Shut only one condensate makeup valve.

ANSWER: 056 (1.00)

c.

REFERENCE:

- 1. VEGP 19100-C, rev. 7, pp. 11, & 12.
- 2. SRO Only.
- 3. 000055K302 [4.3/4.6]

000055K302 ..(KA's)

QUESTION: 057 (1.00)

WHICH ONE (1) of the following vital instrument panels, if deenergized, will result in a loss of the Train B sequencer?

- a. 1NY1N.
- b. 1NY2N.
- c. 1BY1B.
- d. 1BY2B.

ANSWER: 057 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-60324-04-C, pp. 37, & 38, LO 4c.
2. Both RO and SRO.
3. 000057A220 [3.6/3.9]

000057A220 ..(KA's)

QUESTION: 058 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 2.
- RV-18, Radioactive Waste Discharge Isolation Valve, CLOSES.

WHICH ONE (1) of the following is the cause of this event?

- a. Floor drain tank level exceeded 95 percent.
- b. Waste monitor tank level exceeded 95 percent.
- c. Total discharge flow to the river is 4750 gpm.
- d. Waste Gas Processing Effluent Monitor ARE-0014 reads 100 cpm.

ANSWER: 058 (1.00)

c.

REFERENCE:

1. VEGP Text 11a, rev. 7, pp. 15, & 16.
2. VEGP Text 17b, rev. 9, pg. 20, & 24.
3. Similar to RO KA 068000A302.
4. SRO Only.
5. 000059A206 [3.5/3.8]

000059A206 ..(KA's)

QUESTION: 059 (1.00)

The following plant conditions exists:

- A large brush fire is burning near the plant.
- Smoke has entered the intakes for the control room ventilation system.

WHICH ONE (1) of the following describes how the control room HVAC is reconfigured to protect the control room personnel from this hazard?

- a. Operators manually shift the control room HVAC to the purge mode.
- b. Operators manually shift the control room HVAC to the isolation mode.
- c. Smoke detectors cause automatic shift of the control room HVAC to the purge mode.
- d. Smoke detectors cause automatic shift of the control room HVAC to the emergency mode.

ANSWER: 059 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-23101-09-C, pp. 13, & 14, LO 1.
2. VEGP Text 24b, rev. 6, pg. 24b-47.
3. Both RO and SRO.
4. 000067A105 [3.0/3.1]

000067A105 ..(KA's)

QUESTION: 060 (1.00)

WHICH ONE (1) of the following conditions constitutes a LOSS of containment integrity per Technical Specifications?

- a. Containment leak rate exceeds Tech Spec 3.6.1.2 while in MODE 5.
- b. Outer airlock door open for the passage of personnel while in MODE 4.
- c. Inner air lock door open for the passage of personnel while in MODE 5.
- d. Charging isolation valves HV-8105 and HV-8106 deenergized open while in MODE 4.

ANSWER: 060 (1.00)

d.

REFERENCE:

- 1. VEGP Tech Spec 1.4, 3.6.1.1, 3.6.1.2, 3.6.1.3.
- 2. VEGP drwg 1X4DB116-1.
- 3. VEGP LO-LP-39210-C, pp. 1, & 9, LO 2.
- 4. Both RO and SRO.
- 5. EQB HNUM 19157, Vogtle 1990-06-25, modified.
- 6. 000069A201 [3.7/4.3]

000069A201 ..(KA's)

QUESTION: 061 (1.00)

WHICH ONE (1) of the following explains why the RCPs are tripped early in the response to a loss of secondary heat sink?

- a. To eliminate the heat input from the RCPs.
- b. To protect the RCPs from potential seal damage.
- c. To ensure that natural circulation is established.
- d. To prevent the RCPs from causing an RCS depressurization transient.

ANSWER: 061 (1.00)

a.

REFERENCE:

- 1. VEGP LO-LP-37051-07-C, pg. 10.
- 2. EQB HNUM 23640, Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 000074K304 [3.9/4.2]

000074K304 ..(KA's)

QUESTION: 062 (1.00)

WHICH ONE (1) of the following completes the statement?

Flow through the Gross Failed Fuel Detector may be secured by operating valves from the _____ or the _____.

- a. QMCB, Nuclear Sampling Panel.
- b. QPCP, Nuclear Sampling Panel.
- c. QMCB, Gross Failed Fuel Detector Panel.
- d. QPCP, Gross Failed Fuel Detector Panel.

ANSWER: 062 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-64202-03, pg. 9, LO 1a, & 1c.
2. EQB HNUM 23695, Vogtle 1991-05-31, modified.
3. Both RO and SRO.
4. 000076A104 [3.2/3.4]

000076A104 ..(KA's)

QUESTION: 063 (1.00)

WHICH ONE (1) of the following plant conditions is assumed to exist as part of the basis of the Technical Specification Limit J, reactor coolant activity?

- a. A steam generator tube rupture in excess of 500 gpm occurs with NO previous primary-to-secondary steam generator leakage.
- b. A loss of coolant accident (LOCA) in excess of 500 gpm occurs with NO previous primary-to-secondary steam generator leakage.
- c. A steam generator tube rupture occurs in conjunction with a steady state primary-to-secondary steam generator leak rate of 1 gpm.
- d. A loss of coolant accident (LOCA) occurs in conjunction with a steady state primary-to-secondary steam generator leak rate of 1 gpm.

ANSWER: 063 (1.00)

c.

REFERENCE:

1. VEGP LO-IP-77011-06-C, Specifications Bases 3/4.4.8.

2. Both RO and SRO.

3. 000007K301 [4.0/4.6]

(KAs)

QUESTION: 064 (1.00)

WHICH ONE (1) of the following explains why the main turbine stop valves on the turbine Control Panel are checked closed following a reactor trip?

- a. Conserve pressurizer inventory.
- b. Prevent excessive RCS cooldown.
- c. Conserve steam generator inventory.
- d. Prevent reverse power of the main generator.

ANSWER: 064 (1.00)

b.

REFERENCE:

- 1. VEGP LO-IP-77011-06-C, pg. 8.
- 2. Both RO and SRO.
- 3. 000007K301 [4.0/4.6]

000007K301 .. (KAs)

QUESTION: 065 (1.00)

The following plant conditions exist:

- Unit 1 has Tripped from 100 percent power.
- Reactor trip breakers are open.
- The transition from EOP 19000-C, "E-0, Reactor Trip or Safety Injection," to EOP 19001-C, "ES-0.1, Reactor Trip Response," is made.

WHICH ONE (1) of the following describes the basis for throttling AFW flow to the minimum value immediately following the reactor trip?

- a. Prevents automatic safety injection.
- b. Enhances reduction of RCS stored energy.
- c. Preserves inventory of the Condensate Storage Tank.
- d. Ensures AFW flow is within the capacity of the AFW pumps.

ANSWER: 065 (1.00)

a.

REFERENCE:

1. VEG, 19001-C, rev. 11, pg. 2.
2. VEGP LO-LP-37011-06-C, pg. 11, LO 8.
3. SRO Only.
4. 000007K301 [4.0/A F³

000007K301 ..(KA 5.

QUESTION: 066 (1.00)

The following plant conditions exist:

- Unit 1 is at 100 percent power.
- Pressurizer pressure channel selector is in the 455-456 position.
- Pressurizer pressure transmitter PT-456 fails to 2390 psig.
- Except for the noted transmitter failure, all of the plant controllers are operating normally.

WHICH ONE (1) of the following actions or conditions will STOP further plant degradation from this event?

- a. Operators manually closing PORV PCV-455.
- b. Operators manually closing pressurizer spray valve PCV-455B.
- c. One (1) pressurizer pressure transmitter, PT-458, sensing 2150 psig.
- d. Two (2) pressurizer pressure transmitters, PT-455 and PT-457, sensing 2180 psig.

ANSWER: 066 (1.00)

d.

REFERENCE:

1. VEGP Logics, Fig. 7.2.1-1, shts. 11, 18, & 19.
2. VEGP LO-LP-60301-06-C, pg. 14.
3. Both RO and SRO.
4. 000008A206 [3.3/3.6]

000008A206 ..(KA's)

QUESTION: 067 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 3.
- At 1300 hrs RCS temperature is 450 degrees F.

WHICH ONE (1) of the following will cause the MOST severe pressurized thermal shock to the reactor pressure vessel?

- a. At 1330 hrs RCS temperature is 401 degrees F.
- b. At 1330 hrs RCS temperature is 499 degrees F.
- c. At 1400 hrs RCS temperature is 349 degrees F.
- d. At 1400 hrs RCS temperature is 551 degrees F.

ANSWER: 067 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-16202-03, rev. 3, pp. 7, & 8, LO 3.
2. VEGP 19200-C, rev. 8, pg. 7.
3. VEGP Technical Specifications 3.4.9.1, & Table 1.2.
4. Both RO and SRO.
5. 000009K308 [3.6/4.1]

000009K308 .. (KA's)

QUESTION: 068 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power due to low pressurizer pressure.
- PORV PCV-456 is open and the block valve will NOT close.
- Reactor coolant pumps have been stopped.

WHICH ONE (1) of the following explains why natural circulation flow could stop under these conditions?

- a. Steam voids will form in the RCP volutes.
- b. Non-condensable gases will fill the reactor head.
- c. Steam voids will form in the steam generator U-tubes.
- d. Non-condensable gases will collect at the steam generator tube sheets.

ANSWER: 068 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-36101-04-C, pp. 21, 22, 23, 24, & 29, LO 12.
2. Both RO and SRO.
3. 000009K101 [4.2/4.7]

000009K101 ..(KA's)

QUESTION: 069 (1.00)

The following plant conditions exist:

- Unit 2 is at 100 percent power.
- Pressurizer level is increasing.
- T-avg is constant.
- LTDN HX OUT HI PRESS annunciator lit.
- Charging flow is decreasing.
- All control systems are in automatic.

WHICH ONE (1) of the following events would cause these conditions?

- a. Loss of VCT make up.
- b. Loss of charging flow.
- c. Orifice isolation valve HV-8149B opening.
- d. Letdown pressure control valve PCV-131 closing.

ANSWER: 069 (1.00)

d.

REFERENCE:

1. VEGP 18007-C, rev. 6, pp. 2, 3, 5, & 11.
2. Both RO and SRO.
3. 000022G011 [3.3/3.6]

000022G011 ..(KA's)

QUESTION: 070 (1.00)

WHICH ONE (1) of the following describes why RHR flow is limited when RCS water level is at mid-nozzle level?

- a. To prevent loss of pump suction due to low net positive suction head.
- b. To prevent a pump overcurrent trip due to the low discharge pressure.
- c. To prevent loss of pump suction due to gas entrainment in the impeller.
- d. To prevent a pump overspeed trip from runout due to low discharge pressure.

ANSWER: 070 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-12101-24-C, pg. 67, LO 18c.
- 2. VEGP 13011-1, rev. 23, pg. 2, precaution 2.1.6.
- 3. EQB HNUM 23691, Vogtle 1991-05-31, modified.
- 4. Both RO and SRO.
- 5. 000025K101 [3.9/4.3]

000025K101 ..(KA's)

QUESTION: 071 (1.00)

The following plant conditions exist:

- Unit 1 is at 100 percent power.
- Pressurizer pressure control is in the 455-456 position.
- Pressurizer pressure transmitter PT-455 indicates 2220 psig.
- All pressurizer heaters are in automatic.

WHICH ONE (1) of the following describes the expected response of the pressurizer heaters?

- a. Two of three backup heater groups are energized.
- b. All back . heater groups are energized.
- c. Proportional heaters group C are full ON.
- d. Proportional heaters group C are full OFF.

ANSWER: 071 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-16303-09-C, pp. 7, 17, 18, & LO-TP-16303-002, LO 3.
2. SRO Only.
3. 000027A205 [3.2/3.3]

000027A205 ..(KA's)

QUESTION: 072 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 2 at $1E+03$ CPS.
- SOURCE RANGE HI VOLTAGE FAILURE annunciator lit.
- N-31 fails downscale.

WHICH ONE (1) of the following is an operator IMMEDIATE ACTION in response to this event?

- a. Select the Source Range channel N-32 on NR-45.
- b. Suspend all operations in the fuel handling building.
- c. Place Source Range channel N-31 level trip switch in bypass.
- d. Suspend all operations involving positive reactivity changes.

ANSWER: 072 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-60302-03, pg. 6.
2. VEGP 18002-C, rev. 5, pg. 2.
3. VEGP 17010-1, rev. 15, pg. 5.
4. Both RO and SRO.
5. EQB HNUM 23693, Vogtle 1991-05-31, modified.
6. 000032G010 [2.9/3.1]

000032G010 ..(KA's)

QUESTION: 073 (1.00)

WHICH ONE (i) of the following describes the effects of a loss of compensating voltage to intermediate range nuclear instrument N-36 during a reactor shutdown?

- a. N-36 will indicate LOW and the source range detector voltage will energize.
- b. N-36 will indicate HIGH and the source range detector voltage will energize.
- c. N-36 will indicate LOW and the source range detector voltage will NOT energize.
- d. N-36 will indicate HIGH and the source range detector voltage will NOT energize.

ANSWER: 073 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-17201-07-C, pg. 10, LO 8.
2. Both RO and SRO.
3. 000033A211 [3.1/3.4]

000033A211 ..(KA's)

QUESTION: 074 (1.00)

WHICH ONE (1) of the following is the reason that the Steam Generator Atmospheric Relief Valve (ARV) setpoint is changed by procedure in response to a steam generator tube leak?

- a. Provides code-compliance over-pressure protection of the steam generator during this event.
- b. Minimizes the possibility of the ARV on the NON-faulted SGs from actuating and causing a release.
- c. Provides additional over-pressure protection to the steam generator in the event of additional tube failures.
- d. Minimizes the possibility of a release by allowing the maximum steam generator pressure without lifting the safeties.

ANSWER: 074 (1.00)

d.

REFERENCE:

- 1. VEGP LO-LP-60309-08-C, pg. 12.
- 2. EQB HNUM 23712. Vogtle 1991-05-31, modified.
- 3. Both RO and SRO.
- 4. 000037K307 [4.2/4.4]

000037K307 ..(KA's)

QUESTION: 075 (1.00)

The following plant conditions exist:

- A steam generator tube rupture occurred.
- Unit 1 has tripped and EOPs were properly followed.
- The SRO is currently in VEGP 19031 "ES-3.1, POST-SGTR COOLDOWN USING BACKFILL."
- At 1310 hrs, cooldown was started and at that time the RCS was at the minimum temperature for criticality.

WHICH ONE (1) of the following conditions is indicative of an acceptable cooldown rate according to VEGP 19031, "ES-3.1, POST-SGTR COOLDOWN USING BACKFILL"?

- a. Hot leg instruments read 490 degrees F at 1340 hrs.
- b. Cold leg instruments read 480 degrees F at 1350 hrs.
- c. Hot leg instruments read 470 degrees F at 1400 hrs.
- d. Cold leg instruments read 460 degrees F at 1410 hrs.

ANSWER: 075 (1.00)

d.

REFERENCE:

1. VEGP 19031, rev. 7, pg. 5.
2. VEGP LO-LP-37312-06-C, pg. 11, LO 4.
3. VEGP LO-LP-16101-06-C, pg. 16, LO 3.
4. Both RO and SRO.
5. 000038A136 [4.3/4.5]

000038A136 ..(KA's)

QUESTION: 076 (1.00)

WHICH ONE (1) of the following explains why it is important to promptly match T-avg to T-ref during a loss of main feed pump event?

- a. To close the steam dumps thereby reducing steam flow.
- b. To reduce RCS temperature thereby increasing the DNBR.
- c. To reduce RCS pressure thereby reducing required feed line pressure.
- d. To close the main feed regulating valves thereby preserving main feed inventory.

ANSWER: 076 (1.00)

a.

REFERENCE:

- 1. VEGP LO-LP-60314-05-C, pp. 6, & 12, LU 5.
- 2. Both RO and SRO.
- 3. 000054K304 [4.4/4.6]

000054K304 ..(KA's)

QUESTION: 077 (1.00)

WHICH ONE (1) of the following will result from a loss of 125 VDC bus IAD1? Assume neither diesel is running.

- a. Diesel generator DG1A will start automatically.
- b. Diesel generator DG1B will start automatically.
- c. Diesel generator DG1A will not start from the control room.
- d. Diesel generator DG1B will not start from the control room.

ANSWER: 077 (1.0)

c.

REFERENCE:

1. VEGP 18034-4, rev. 1, pg. 2.
2. Both RO and SRO.
3. 000058A203 [3.5/3.9]

000058A203 ..(KA's)

QUESTION: 078 (1.00)

The following plant conditions exist:

- A reactor trip has occurred from 100 percent power.
- Containment low range area monitors 1-RE-0002 and 1-RE-0003 are in alarm.

WHICH ONE (1) of the following describes the cause for these alarms?

- a. A steam line break accident has occurred.
- b. A loss of reactor coolant accident has occurred.
- c. N-16 background in containment has exceeded 10 mrem/hr.
- d. Airborne particulate activity has exceeded 500 micro-curies/cubic meter.

ANSWER: 078 (1.00)

b.

REFERENCE:

1. VEGP 17102-1, rev. 8, pp. 14, & 25.
2. Both RO and SRO.
3. 000061G005 [3.1/3.3]

000061G005 ..(KA's)

QUESTION: 079 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power due to low instrument air pressure.
- All attempts to restore instrument air have failed.

WHICH ONE (1) of the following is the guidance and the reason found in VEGP 18028, "Loss of Instrument Air," for entering MODE 4?

- a. Remain in MODE 3 to provide time to restore instrument air.
- b. Remain in MODE 3 to ensure that EOP 19000-C (E-0) is complete.
- c. Cooldown to MODE 4 rapidly to reduce total plant's stored energy.
- d. Cooldown to MODE 4 rapidly to reduce release rates through fail-open valves.

ANSWER: 079 (1.00)

a.

REFERENCE:

1. VEGP 18028-C, rev. 10, pg. 11.
2. VEGP LO-LP-60321-07-C, pg. 13, LU 4.
3. SRO Only.
4. 000065K308 [3.7/3.9]

000065K308 ..(KA's)

QUESTION: 080 (1.00)

The following plant conditions exist:

- Unit 1 is at 100 percent power.
- Pressurizer level control channel selector is in the 459/460 position.
- Pressurizer level transmitter LT-459 fails to 45 percent.

WHICH ONE (1) of the following plant responses occurs FIRST?

- a. Reactor trips on high pressurizer level.
- b. Pressurizer heaters deenergize.
- c. Letdown isolation valve LCV-460 closes.
- d. Regenerative heat exchanger outlet temperature increases.

ANSWER: 080 (1.00)

a.

REFERENCE:

1. VEGP 16302-06-C pg. 16, LO-TP-16302-007.
2. Both RO and SRO.
3. 000028A202 [3.4/3.8]

000028A202 ..(KA's)

QUESTION: 081 (1.00)

The following plant conditions exist:

- Unit 1 is in MODE 6.
- Fuel Handling Building Ventilation Isolation has actuated.

WHICH ONE (1) of the following signals could have caused this event?

- a. LOW air flow in the normal fuel handling bldg HVAC.
- b. LOW air flow in the fuel pool area recirculation units.
- c. Spent Fuel Pool cooling temperature equals 132 degrees F.
- d. Fuel Handling Building differential pressure equals 0.30 inches water gauge.

ANSWER: 081 (1.00)

d.

REFERENCE:

1. VEGP Text 24c, rev. 1, pg. 24c-18.
2. VEGP LO-LF-23301-11-C, pg. 10, LO 3.
3. VEGP LO-LP-25102-09-C, pg. 17.
4. EQB HNUM 23656, Vogtle 1991-05-25, modified.
5. Both RO and SRO.
6. 000036K302 [2.9/3.6]

000036K302 ..(KA's)

QUESTION: 082 (1.00)

The following plant conditions exist:

- Unit 1 has tripped from 100 percent power due to a loss of off-site power.
- Diesels start and the sequencers begin loading the diesels.
- 15 seconds after the sequencers start, safety injection is inadvertently actuated.

WHICH ONE (1) of the following explains the subsequent response of the Unit 1 sequencers?

- a. The sequencers will reset immediately and start sequencing the SI loads.
- b. The sequencers will reset in 20 seconds and start sequencing the SI loads.
- c. The sequencers must be reset manually before the SI loads will begin sequencing.
- d. The sequencers will start those SI loads not started previously by the UV sequencer after 20 seconds.

ANSWER: 082 (1.00)

a.

REFERENCE:

1. VEGP LO-LP-28201-13-C, pp. 8, 9, & 11.
2. Both RO and SRO.
3. 000056A247 [3.8/3.9]

000056A247 ..(KA's)

QUESTION: 083 (1.00)

WHICH ONE (1) of the following completes the statement?

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

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

ANSWER: 083 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-63502-04, pg. 7, LO 2c.
2. VEGP 0052-C, Section 4.3, pg. 5.
3. EQB HNUM 19187, Vogtle 1990-06-25.
4. 194001A101 [3.3/3.4]
5. SRO Only.

194001A101 ..(KA's)

QUESTION: 084 (1.00)

WHICH ONE (1) of the following completes the statement?

If EOP SUB STEPS are designated with letters, then.....

- a. ...they must be performed in sequence.
- b. ...they are IMMEDIATE ACTION steps which must be performed from memory.
- c. ...they are CONTINUOUS ACTION steps and must be monitored continuously while executing the EOP.
- d. ...you cannot continue on to the next sequential step within that EOP until you satisfactorily complete the designated sub steps.

ANSWER: 084 (1.00)

a.

REFERENCE:

1. VEGP LC-LP-376. Vol C, pp. 5, & 6.
2. 194001A102 [4.1/3.9]
3. SRO Only.

194001A102 ..(KA's)

QUESTION: 085 (1.00)

WHICH ONE (1) of the following is the MINIMUM shift crew composition if Unit 1 is in MODE 3 and Unit 2 is in MODE 6 according to Technical Specification 6.2.2, "Plant Staff"?

	SS	SRO	RO	NLO	STA
a.	1	1	2	2	1
b.	1	0	2	3	0
c.	1	1	3	3	1
d.	1	2	3	3	1

ANSWER: 085 (1.00)

c.

REFERENCE:

1. VEGP LO-LP-39217-04-C, pg. 8
2. EQB HNUM 23718, Vogtle 1991-05-31, modified.
3. 194001A103 [2.5/3.4]
4. SRO Only.

194001A103 ..(KA's)

QUESTION: 086 (1.00)

The following times were logged by a Reactor Operator involved in a special safety related function:

Date	Time started work	Time secured from work	Turn over period
Oct. 20	0600 hrs.	1800 hrs.	30 mins.
Oct. 21	0600 hrs.	1400 hrs.	30 mins.
Oct. 22	0600 hrs.	2200 hrs.	30 mins.

WHICH ONE (1) of the following specifies the EARLIEST time this operator can report for work on October 23 for a 12-HOUR shift without special permission?

- a. 0600 hrs.
- b. 1000 hrs.
- c. 1800 hrs.
- d. 2200 hrs.

ANSWER: 086 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-39217-04-C, pg. 8.
2. VEGP Technical Specifications 6.2.2, "Plant Staff", p. 6-2.
2. 194001A103 [2.5/3.4].
3. SRO only.

194001A103 ..(KA's)

QUESTION: 087 (1.00)

WHICH ONE (1) of the following actions may be delegated by the Emergency Director (ED) during a Site Area Emergency?

- a. Recommending protective actions.
- b. Ordering security actions to be initiated.
- c. Making requests for offsite assistance.
- d. Approval for exceeding 10CFR20 dose limits.

ANSWER: 087 (1.00)

b.

REFERENCE:

- 1. VEGP LO-LP-40101-15-C, pp. 15, & 16.
- 2. VEGP 91001-C, rev. 9, pg. 1.
- 3. VEGP 9100?-C, pg. 1, & 2.
- 4. 194001A116 [3.1/4.4]
- 5. SRO Only.

194001A116 ..(KA's)

QUESTION: 088 (1.00)

WHICH ONE (1) of the following describes one requirement at Vogtle for operations log entries?

- a. The last entry for the shift will be "Relieved by _____", followed by the signature of the on-coming person.
- b. A late entry must be made within one (1) hour of the time the event occurred and "Late Entry" or "LE" shall be written next to the entry time.
- c. Action entries shall be noted on the unit status board and logged when plant conditions allow.
- d. Errors in all log entries shall be voided by a single line and initialed by the individual voiding the entry.

ANSWER: 088 (1.00)

d.

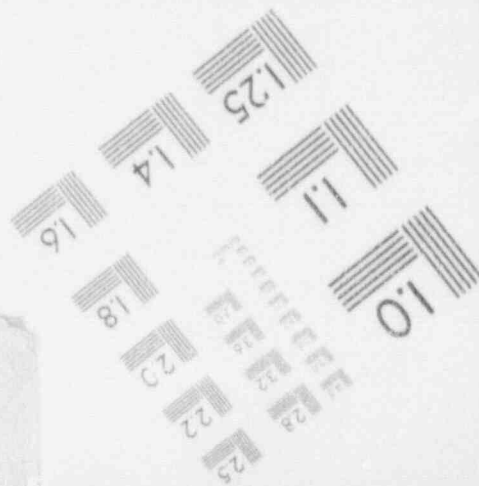
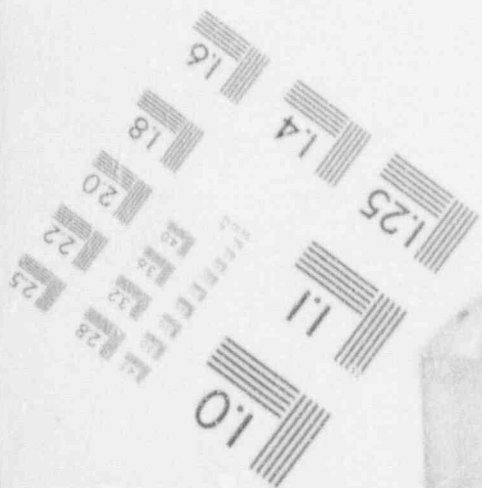
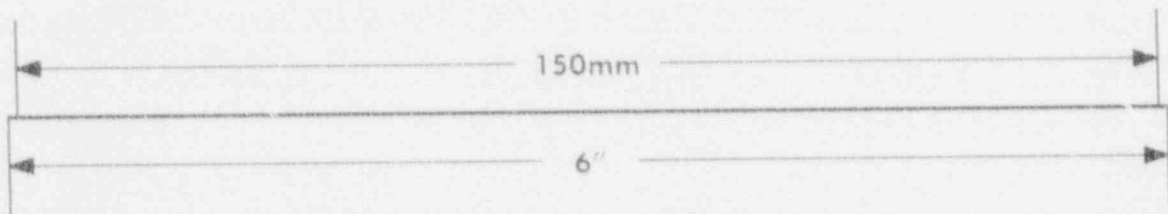
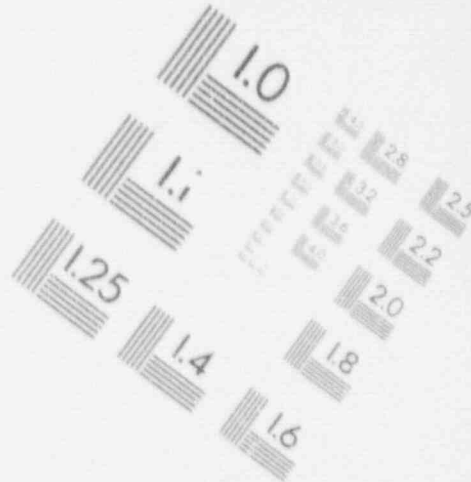
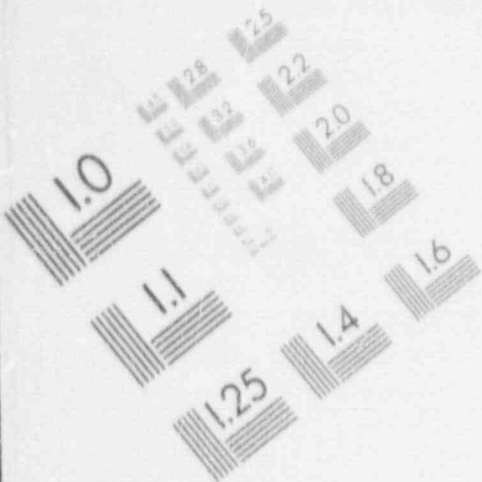
REFERENCE:

- 1. VEGP LO-LP-63501-05, pp. 7, & 8.
- 2. VEGP 10001-C, pg. 1, 2, 3, & 4.
- 3. 194001A106 [3.4/3.4]
- 4. Bot.. RO and SRO.

194001A106 ..(KA's)

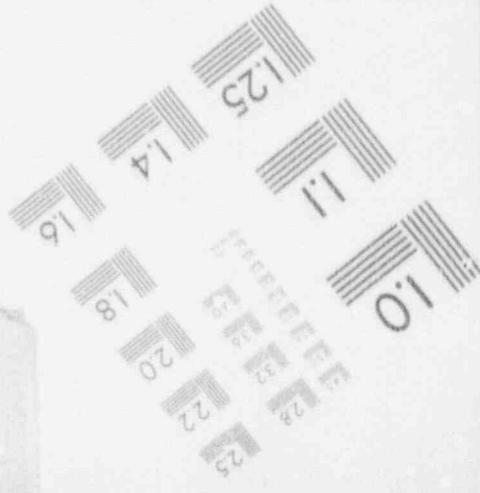
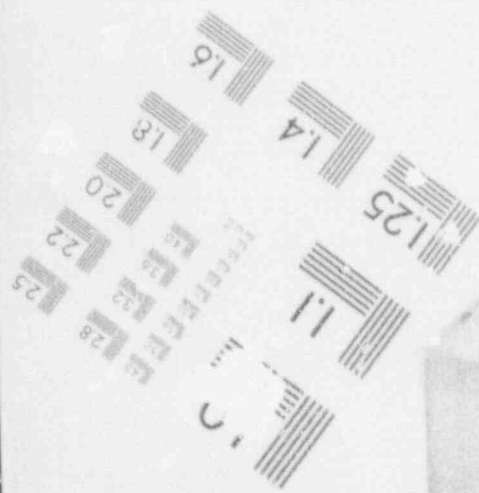
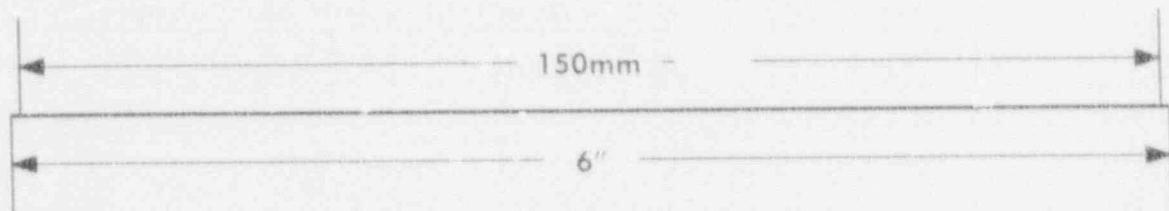
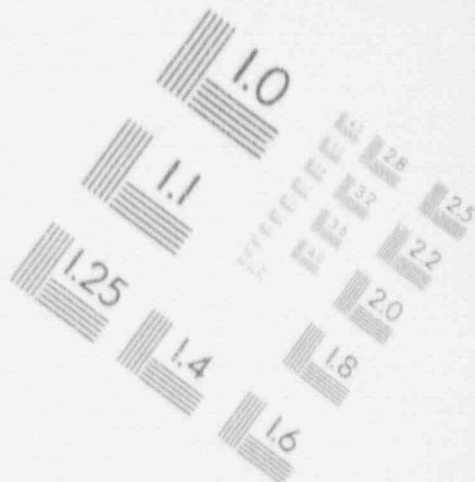
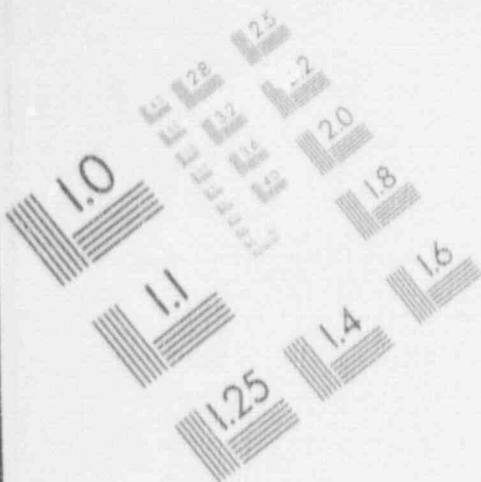
1

IMAGE EVALUATION TEST TARGET (MT-3)



1

IMAGE EVALUATION TEST TARGET (MT-3)



QUESTION: 089 (1.00)

WHICH ONE (1) of the following completes the sentence?

Caution Tags are...

- a. ... used for the purpose of personnel protection.
- b. ... used for the purpose of protecting plant equipment.
- c. ... only valid when reviewed and approved by a Shift Superintendent.
- d. ... destroyed by the PEO removing the tag if they are not contaminated.

ANSWER: 089 (1.00)

b.

REFERENCE:

- 1. VEGP 00304-C, rev. 21, pp. 28 & 29.
- 2. 194001K102 [3.7/4.1]
- 3. SRO Only.

194001K102 ..(KA's)

QUESTION: 090 (1.00)

The following plant conditions exist:

- Unit 1 is at 85% power.
- You are the Unit 1 RO.
- The BOP operator is in the Turbine Building assisting the I/O.
- You must leave the control room for about 40 minutes to assist on a special task.

WHICH ONE (1) of the following is the minimum relief requirement in order for you to leave?

- a. A brief walkdown of the control board with a qualified RO.
- b. A full shift turnover to another licensed operator on shift.
- c. Have the Unit-2 BOP assume Unit-1 RO responsibilities by obtaining permission from the Unit-1 USS.
- d. A review of data that has been generated since the start of the shift with an RO knowledgeable of plant conditions.

ANSWER: 090 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-63504-08, pg. 9.
2. Vogtle: Exam Bank CL-63, "LO Administrative", Question # 2.13, p. 26.
3. VEGP 10004-C, pg. 3.
4. 194001A106 [3.4/3.4]
5. Both RO and SRO.

194001A106 ..(KA's)

QUESTION: 091 (1.00)

WHICH ONE (1) of the following is the MINIMUM frequency that a zone within a specified area must be patrolled to be considered a continuous fire watch?

- a. Once every 10 minutes.
- b. Once every 15 minutes.
- c. Once every 30 minutes.
- d. Once every 60 minutes.

ANSWER: 091 (1.00)

a.

REFERENCE:

1. VEGP LO-LP-43101-07-C, pg. 13.
2. 194001K116 [3.5/4.2]
3. SRO only.

194001K116 ..(KA's)

QUESTION: 092 (1.00)

The following situation exist:

- You are the Shift Superintendent at 0230 on a Sunday morning.
- The Unit 1 USS has determined that a clearance is required to be released on a system.
- The subclearance holder is not on site.

WHICH ONE (1) of the following actions is required to enable you to release the subclearance?

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

ANSWER: 092 (1.00)

b.

REFERENCE:

1. VEGP LO-LP-63304-12-C, pg. 7, LO 1.
2. VEGP 00304-C, rev. 21, pg. 6.
3. EQB HNUM 20602, Vogtle 1990-02-12, modified.
4. 194001K102 [3.7/4.1]
5. SRO Only.

194001K102 ..(KA's)

QUESTION: 093 (1.00)

WHICH ONE (1) of the following individuals may supplement the Fire Team when necessary?

- a. Shift Supervisor.
- b. Reactor Operator.
- c. Outside Area Operator.
- d. Balance of Plant Operator.

ANSWER: 093 (1.00)

c.

REFERENCE:

- 1. VEGP 10003-C, rev. 13, pg. 2.
- 2. 19400JK116 [3.5/4.2]
- 3. Both RO and SRO.

19400JK116 ..(KA's)

QUESTION: 094 (1.00)

The following plant conditions exist:

- A containment entry has been made with reactor power holding at 27%.
- A Control Point has NOT been established.

WHICH ONE (1) of the following represents the plant personnel responsible for; (1) tracking the names of team members entering containment and (2) ensuring that all of those who entered have evacuated if evacuation were to become necessary?

- a. (1) Unit Shift Supervisor, (2) Unit Shift Supervisor.
- b. (1) Unit Shift Supervisor, (2) Health Physics Supervisor.
- c. (1) Health Physics Supervisor, (2) Unit Shift Supervisor.
- d. (1) Health Physics Supervisor, (2) Health Physics Supervisor.

ANSWER: 094 (1.00)

a.

REFERENCE:

1. VEGP, 00303-C, pg. 3.
2. 194001K105 [3.1/3.4]
3. RO and SRO.

194001K105 ..(KA's)

QUESTION: 095 (1.00)

WHICH ONE (1) of the following represents the point at which MODE 2 is entered from MODE 3 during a reactor startup?

- a. Reactor power reaches 1%.
- b. K-eff is greater than or equal to 1.0.
- c. Tie first control bank rod is taken off the bottom of the core.
- d. Reactor coolant temperature increases 2 degrees F above the minimum temperature for criticality.

ANSWER: 095 (1.00)

c.

REFERENCE:

- 1. VEGP LO-LP-39202-06-C, pg. 11, 21.
- 2. 194001A106 [3.4/3.4]
- 3. Both RO and SRO.

194001A106 ..(KA's)

QUESTION: 096 (1.00)

WHICH ONE (1) of the following situations is INAPPROPRIATE for marking a procedure step "N/A"?

- a. When the step starts inoperable equipment.
- b. When the marked step results in omission of required work.
- c. When the step covers equipment not being tested at the present time.
- d. When the step is not applicable to the present operating condition.

ANSWER: 096 (1.00)

b.

REFERENCE:

1. VEGP, Lesson Plan LO-LP-63054-06-C, pg. 8, LO 1b.
2. VEGP 00054-C, rev. 7, pg. 5.
3. 194001A102 [4.1/3.9]
4. Both RO and SRO.

194001A102 ..(KA's)

QUESTION: 097 (1.00)

WHICH ONE (1) of the following is the MAXIMUM area temperature in which a person can perform a task WITHOUT the approval of the Health Physics Supervisor AND the Unit Shift Supervisor?

- a. 99 degrees F.
- b. 104 degrees F.
- c. 114 degrees F.
- d. 119 degrees F.

ANSWER: 097 (1.00)

d.

REFERENCE:

1. VEGP LO-LP-63303-01, rev. 1, pg. 15, LO 5.
2. 194001K108 [3.5/3.4]
3. Both RO and SRO.

194001K108 ..(KA's)

QUESTION: 098 (1.00)

WHICH ONE (1) of the following completes the statement?

Emergency maintenance is any activity that...

- a. ...needs to be performed within 24 hours.
- b. ...is critical to the schedule or safety.
- c. ...maintains safe shutdown or operating capability.
- d. ...is performed on equipment that could cause a reactor trip without special precautions being taken.

ANSWER: 098 (1.00)

c.

REFERENCE:

1. VEGP, LO-LP-63350-06-C, pp. 10, & 11.
2. 194001A112 [3.1/4.1]
3. Both RO and SRO.

194001A112 ..(KA's)

QUESTION: 099 (1.00)

The following conditions plant exist:

- Unit 1 is at 98 percent power.
- VEGP 14980-1, "Diesel Generator Operability Test" is being performed to satisfy Technical Specification 4.8.1., "AC Sources."
- On the initial start attempt, the diesel failed to attain rated speed and voltage in the prescribed time frame.
- This attempt meets the criteria for a valid failure.
- No corrective action has been taken.

WHICH ONE (1) of the following indicates the action(s) to be taken by the SS in regard to this surveillance?

- a. Retest the start portion of the test immediately after completing the diesel shutdown portion of the surveillance.
- b. Complete the surveillance and allow retesting of the failed portion of the surveillance until the number of failures in the last 20 starts exceeds four (4).
- c. Call the Engineering Support Department and request that they witness the immediate retest of the start portion of the surveillance.
- d. Declare the diesel generator out of service and comply with the action statement in T.S. 4.8.1. while initiating a Maintenance Work Order.

ANSWER: 099 (1.00)

d.

REFERENCE:

1. VEGP 14980-1, pg. 21.
2. VEGP LO-LP-63404-07, pp. 11, & 12.
3. 194001A111 [2.8/4.1], 194001A110 [2.9/3.9]
4. SRO only.

194001A111 ..(KA's)

QUESTION: 100 (1.00)

WHICH ONE (1) of the following radiological conditions requires posting as HOT SPOT within an RCA?

- a. General reading 5 mrem/hr with contact reading of 50 mrem/hr.
- b. General reading 15 mrem/hr with contact reading of 200 mrem/hr.
- c. General reading 50 mrem/hr with contact reading of 300 mrem/hr.
- d. General reading 300 mrem/hr with contact reading of 1.0 Rem/hr.

ANSWER: 100 (1.00)

c.

REFERENCE:

- 1. VEGP 00930-C, rev. 6, pg. 2.
- 2. VEGP LO-LP-63930, pg. 7, LO 1.
- 3. 194001K103 [2.8/3.4]
- 4. Both RO and SRO.
194001K103 ..(KA's)

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

ANSWER KEY

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

ANSWER KEY

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

A N S W E R K E Y

092 b

093 c

094 a

095 c

096 b

097 d

098 c

099 d

100 c

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

S R O Exam P W R Reactor
Organized by Question Number

<u>QUESTION</u>	<u>VALUE</u>	<u>REFERENCE</u>
001	1.00	8000002
002	1.00	8000004
003	1.00	8000005
004	1.00	8000081
005	1.00	23521
006	1.00	8000007
007	1.00	8000009
008	1.00	8000010
009	1.00	8000011
010	1.00	8000034
011	1.00	8000013
012	1.00	8000093
013	1.00	8000014
014	1.00	8000016
015	1.00	8000017
016	1.00	8000018
017	1.00	8000019
018	1.00	8000020
019	1.00	8000024
020	1.00	8000025
021	1.00	8000026
022	1.00	8000027
023	1.00	8000028
024	1.00	8000030
025	1.00	8000032
026	1.00	8000033
027	1.00	8000035
028	1.00	8000038
029	1.00	8000039
030	1.00	8000040
031	1.00	23655
032	1.00	8000029
033	1.00	8000042
034	1.00	8000043
035	1.00	8000045
036	1.00	8000046
037	1.00	8000047
038	1.00	8000050
039	1.00	8000051
040	1.00	8000052
041	1.00	8000054
042	1.00	8000057
043	1.00	8000055
044	1.00	8000056
045	1.00	8000036
046	1.00	8000058
047	1.00	8000061
048	1.00	8000062
049	1.00	8000053

S R O Exam P W R Reactor
Organized by Question Number

<u>QUESTION</u>	<u>VALUE</u>	<u>REFERENCE</u>
050	1.00	8000064
051	1.00	8000065
052	1.00	8000060
053	1.00	8000091
054	1.00	8000068
055	1.00	8000071
056	1.00	8000079
057	1.00	8000069
058	1.00	8000080
059	1.00	8000075
060	1.00	8000074
061	1.00	8000076
062	1.00	8000077
063	1.00	8000078
064	1.00	8000083
065	1.00	8000084
066	1.00	8000085
067	1.00	8000066
068	1.00	8000086
069	1.00	8000088
070	1.00	8000089
071	1.00	8000090
072	1.00	8000092
073	1.00	8000012
074	1.00	8000094
075	1.00	8000095
076	1.00	8000096
077	1.00	8000097
078	1.00	8000100
079	1.00	8000101
080	1.00	8000102
081	1.00	8000103
082	1.00	8000104
083	1.00	19187
084	1.00	8000106
085	1.00	8000107
086	1.00	8000108
087	1.00	8000109
088	1.00	8000111
089	1.00	8000112
090	1.00	8000113
091	1.00	8000114
092	1.00	8000117
093	1.00	8000119
094	1.00	8000120
095	1.00	8000121
096	1.00	8000122
097	1.00	8000123
098	1.00	8000124

S R O Exam P W R Reactor
Organized by Question Number

<u>QUESTION</u>	<u>VALUE</u>	<u>REFERENCE</u>
099	1.00	8000125
100	1.00	8000126

	100.00	

	100.00	

S R O Exam P W R Reactor
Organized by KA Group

PLANT WIDE GENERICS

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
083	1.00	194001A101
084	1.00	194001A102
096	1.00	194001A102
086	1.00	194001A103
085	1.00	194001A103
090	1.00	194001A106
095	1.00	194001A106
088	1.00	194001A106
099	1.00	194001A111
098	1.00	194001A112
087	1.00	194001A116
092	1.00	194001K102
089	1.00	194001K102
100	1.00	194001K103
094	1.00	194001K105
097	1.00	194001K108
091	1.00	194001K116
093	1.00	194001K116

PWG Total	18.00	

PLANT SYSTEMS

Group I

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
001	1.00	001050K401
002	1.00	003000K201
004	1.00	003000K614
006	1.00	004020A303
005	1.00	004020A305
007	1.00	013000A301
008	1.00	013000K401
010	1.00	014000G008
009	1.00	014000G012
011	1.00	015000K101
012	1.00	015000K103
013	1.00	017020A201
014	1.00	026000A301
015	1.00	056000K103
016	1.00	059000A306
017	1.00	059000K104
018	1.00	061000K402
019	1.00	071000A202
020	1.00	072000K401

S R O Exam P W R Reactor
Organized by KA Group

PLANT SYSTEMS

Group I

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
PS-I Total	19.00	

Group II

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
021	1.00	002000K109
023	1.00	006030K403
022	1.00	006030K404
024	1.00	01000A211
026	1.00	012000K402
025	1.00	012000K604
027	1.00	016000K101
028	1.00	029000A301
029	1.00	033000K401
030	1.00	034000G009
032	1.00	035010A301
031	1.00	035010K403
033	1.00	039000A302
034	1.00	062000K201
035	1.00	075000K108
036	1.00	086000G007
PS-II Total	16.00	

Group III

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
037	1.00	005000K407
038	1.00	041020K417
039	1.00	045010K111
040	1.00	076000K402
PS-III Total	4.00	

PS Total	39.00	
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EMERGENCY PLANT EVOLUTIONS

Group I

S R O Exam P W R Reactor
Organized by KA Group

EMERGENCY PLANT EVOLUTIONS

Group I

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
042	1.00	000001K105
041	1.00	000001K107
043	1.00	000003K304
044	1.00	000005A203
046	1.00	000011A103
045	1.00	000011A111
003	1.00	000015A122
047	1.00	000015G010
048	1.00	000024A206
049	1.00	000024K301
050	1.00	000026G003
051	1.00	000026K303
052	1.00	000029G012
053	1.00	000029K312
054	1.00	000051A202
055	1.00	000055K102
056	1.00	000055K302
057	1.00	000057A220
058	1.00	000059A206
059	1.00	000067A105
060	1.00	000069A201
061	1.00	000074K304
062	1.00	000076A104
063	1.00	000076G004

EPE-I Total	24.00	

Group II

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
064	1.00	000007K301
065	1.00	000007K301
066	1.00	000008A206
068	1.00	000009K101
067	1.00	000009K308
069	1.00	000022G011
070	1.00	000025K101
071	1.00	000027A205
072	1.00	000032G010
073	1.00	000033A211
074	1.00	000037K307
075	1.00	000038A136
076	1.00	000054K304
077	1.00	000058A203

S R O Exam P W R Reactor
O r g a n i z e d b y K A G r o u p

EMERGENCY PLANT EVOLUTIONS

Group II

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
078	1.00	000061G005
079	1.00	000065K308

EPE-II Total	16.00	

Group III

<u>QUESTION</u>	<u>VALUE</u>	<u>KA</u>
080	1.00	000028A202
081	1.00	000036K302
082	1.00	000056A247

EPE-III Total	3.00	

EPE Total 43.00

Test Total 100.00

ENCLOSURE 3

SIMULATOR FIDELITY REPORT

Facility Licensee: Georgia Power Company
Facility Docket Nos.: 50-424 and 50-424
Operating Tests Administered On: December 10 - 12, 1991

This form is to be used only to report observations. These observations do not constitute, in and of themselves, audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

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

DESCRIPTION

There were no discrepancies noted during the exams.