

**April 2010 River Bend Station  
NRC Initial License Examination Analysis  
April 21<sup>st</sup>, 2010**

Question	Analysis	
8	Both C & D are incorrect because of the stable IAS pressure with only 1 IAS/1 SAS compressor in operation. At 113 psig SAS-AOV134 will open, if pressure lowered to 110 psig then SAS-AOV133 would close.	Question Valid
10	A fuel bundle is ~ 14 feet long in order to clear the RPV flange during refueling operations with 8.5 feet of water shielding above would require 23 feet above the flange. The flange at +200inches and the TAF at -162 converts to a little over 30 feet from TAF to flange.	Question Valid
12	SRV initial opening pressure is 1133 psig, at that pressure the superheated steam at Atmospheric pressure is ~285 degF, at 450 psig the temperature is ~330 degF.	Question Valid
13	Suppression Pool level of 19' 11" and 140 degF lie within the SAFE region of EOP-002. HCTL below 800 psig. SOP-0031 P&L 2.5 has several statements about exceeding 5800 gpm Service Water Flow (Normal or Standby). P&L 2.4.5 states that shell side flow can not exceed 5550 gpm which is the RHR flow side.	Question Valid
20	Reactive power (VAR) required is a function of the load on the grid. With the loss of other units the same reactive component is still required and must be supplied by the remaining unit(s). So reactive load supplied by RBS will increase. In Auto the voltage regulator will attempt to maintain the same generator terminal voltage, to supply a higher output voltage, the magnetic field in the stator must be strengthened. To raise the magnetic field the current must be raised.	Question Valid
28	With control transferred to the Remote Shutdown panel all logic circuits in the MCR would be bypassed. All actions would be manual and would require operator action to change the configuration.	Question Valid
29	CCP-MOV16A provides cooling to the Safety Related 'A' Loop components for RHR 'A' pump and Fuel Pool Cooling Hx 'A', RWCU and Recirc pumps would not be affected.	Question Valid

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- 32 In Mode 3, you would be in the Operating section of Tech. Spec. so B & D are incorrect, since this involves a single component supplied by a single breaker the remainder of the bus can meet its operability requirements, only the individual HPCS pump would be inoperable. Question Valid
- 36 108/125 generates an IRM Alarm Upscale signal which generates a Rod Block in RC&IS. A signal of 120/125 is required to generate a RPS trip signal. Question Valid
- 37 Only SRM Rod block signals are INOP, Downscale <3cps, Upscale >10E5cps, and Retract permit <100cps. Of the four SRM only 3 are on scale/operable. None of the 3 operable are above the Upscale trip or below the downscale trip. While the SRM's are not fully inserted the rod block is bypassed when the IRM's are range 3 or above. Placing the SRM switch in STANDBY removes the reference signal into the trip unit causing a Rod Block. Question Valid
- 38 P680 and Back panel indications are supplied by a common power source. The APRM cabinets are all supplied by 120VAC RPS power as is the RPS trip Logic. The APRM cabinets require 5, 20 & 24VDC which is supplied by a Power supply at the bottom of the APRM cabinet which must be reset to energize after a loss of power. Question Valid
- 42 The ADS 'E' subchannel is energized however both subchannels A & E are required to energize the Div 1 ADV valve logic. The logic train for the 'A' subchannel is incomplete, A LOCA signal has actuated the High Drywell pressure and/or Level 1 logic, the Level 3 logic has completed and closed in the only action which has not taken place is timing out of the 105 second timer between the subchannel 'A' logic and the K6A relay coil. Because the 'E' subchannel is sealed in the Div 1 ECCS Pump Running logic has been made up. Question Valid
- 43 In Startup/Hot Standby the RPS Hi level signal is bypassed by the K24 relay when the mode switch is not in RUN, no scram will result. CNM-FV104 will require manual operation since there is no level input; it is a manual flow control valve. With the Startup Feedwater valve open and able to supply 10% of rated flow the level will raise until something terminates the flow. In this case a high level 8 trip of the Feedwater Pumps Question Valid

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- 47 The UPS has 3 sources of power the DC Battery bank, the Rectifier supplied by an AC source and an Alternate AC source supplied thru a conditioning transformer. The AC supplied is the normal source of power to the UPS inverter, with the DC Battery bank operated at a lower voltage, so current flow is from the Rectifier. When the Rectifier is lost the voltage will lower until it is equal to the DC Battery bank at which point the current flow will seamlessly flow from the DC Batteries. The Static Switch only come into play when both the Rectifier and DC Battery sources or the Inverter which is a DC-AC converter fail to provide voltage, at which point the Static switch will transfer to the Alternate AC power source. Question Valid
- 48 The correct power supply for E51-MOVF013 is ENB-MCC1. ENB-MCC1 supplies the power to several RCIC valves. ENB-PNL02A does not supply power to RCIC, and ENB-SWG1B and ENB-CHGR1B are Division 2 Question Valid
- 49 Normally DC buses are supplied by the Bus DC Charger. On a loss of all AC power the loads will be carried by the batteries. Depending on the design load requirements, the Safety Related ENB bus are expected to last 4 hours and the non safety related DC bus only 2 hours. If power is not expected back for 12 hours the batteries are expected to be depleted. A Backup supply of DC power to the Buses and/or recharging the batteries will be required. This function is met with the Station Blackout Diesel Generator supplying an ENB Bus DC charger. Question Valid
- 51 Fire Protection headers in the Diesel Generator room have temperature activated sprinkle heads, so no flow of water is expected, the valve is better described s a pre-action valve. There is no Diesel Generator trip circuit as part of the Fire Suppression/ Detection system. Question Valid
- 60 Tech Spec 3.6.1.9 LCO requires both subsystems in Modes 1, 2, & 3. Question Valid  
50%
- 67 Unescorted access to the Protected area requires PAT, Drug Testing (initial and random) and Psychological testing (Initial MMPI & Behavioral Observation) Question Valid
- 73 MON 028 ITEM command is used during STP-000-0001 for the operator to read sample No. 1 flow. Per SOP-86. Question Valid