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the southern electric system
NED-84-159

March 26, 1984

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
ADDITIONAL INFORMATION - INSERVICE TESTING PROGRAMS

Gentlemen:

Pursuant to your request of February 23, 1984, enclosed as Attachment 1 is additional information concerning the proposed programs for the inservice testing of pumps and valves for Plant Hatch Units 1 and 2. The proposed programs were submitted to you for review by our letter dated August 12, 1983. For your convenience during the review process, the NRC questions have been repeated in our response.

Should you have any questions in this regard, please contact this office.

Sincerely yours,

L. T. Gucwa

JAE/pjm

Attachment

xc: H. C. Nix, Jr.
Senior Resident Inspector
J. P. O'Reilly (NRC Region II)

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ATTACHMENT 1

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION RELATED
TO THE HATCH PROGRAMS FOR INSERVICE TESTING OF
PUMPS AND VALVES

A. PUMPS - HATCH UNITS 1 & 2

1. Please justify why Fuel Oil Transfer pumps should not be included in the IST Program and tested to meet Code Requirements.

Response

As addressed in our letter dated August 12, 1983, it is the position of Georgia Power Company (GPC) that the Diesel Generator Fuel Oil System is not within the scope of ASME Section XI as defined in NRC Regulatory Guide 1.26, i.e., it is not steam or water containing. For your further information the following is provided:

The design arrangement of the system provides for five 40,000 gallon storage tanks each supplying a 1000 gallon day tank. Each storage tank has two 100% capacity transfer pumps that can transfer diesel fuel to the day tank. In addition, through a header arrangement any day tank can be filled using any one of the ten pumps.

The operability of these pumps is verified monthly by Technical Specification requirements. Adequate testing exists, plus from the above description the loss of a pump will not prevent transfer of fuel oil to the day tank. The incorporation of these pumps into a Section XI-type testing program is, therefore, not justifiable.

2. Standby Liquid Control pumps C41-0001 A & B. Please elaborate on the Basis of Relief Request 7.1.2; i.e., how is this quarterly 2-minute test performed?

Response

Standby Liquid Control (SBLC) is aligned so that each pump takes suction from a demineralized water source and discharges through a throttle valve to a test tank. The pump is placed into operation and the throttle valve adjusted to obtain a reference discharge pressure. The level of the test tank is then measured and the pump then run for two minutes. After the two minute run the tank level is again measured. Flowrate is then determined by the following equation:

$$\text{Flow (gpm)} = \frac{\Delta \text{ Tank level (in.)}}{2 \text{ min.}} \times 4.81 \text{ gal./in.}$$

For a situation in which the flowrate is measured by instrument a 0-100 gpm instrument would normally be used for the SBLC pump flowrate of approximately 43 gpm. The required accuracy of this instrument would be $\pm 2\%$ or ± 2 gpm. This corresponds to $\pm .83$ inches of water level in the test tank. Therefore, the accuracy of the measured flowrate should be well within code allowable.

3. Relief Request 7.1.3.1. Please define P and P_o and verify which value of the conversion factor (0.0433 or 0.433 psig per foot of water is applicable).

Response

The equation should read:

$$\Delta P = P_o + (114.5' - \text{River Water Level}) \times 0.433$$

where ΔP is the differential pressure and P_o the outlet pressure.

B. VALVES - HATCH UNITS 1 & 2

1. Does the licensee desire relief from IWV-3417(b) and IWV-3523 to permit plant startup with an inoperable valve when permitted by Technical Specifications? Such a request was submitted with the initial Valve Test Program but not with the August 1983 revision.

Response

The following relief request should be added to the program:

6.1.23 Test Requirement

IWV-3417 states that when corrective action is required as a result of tests made during cold shutdown, the condition shall be corrected before startup.

6.1.23.1 Basis for Relief

Under such conditions startup shall be permitted as provided in the Technical Specifications.

2. Relief from Code requirements (Request 6.1.5) is requested for valve C41-F006. Is the same relief requested for valve C41-F007?

Response

Relief Request 6.1.5 also applies to valve C41-F007.

3. During the June 23, 1983 meeting between Georgia Power Company and NRC personnel, the NRC staff elaborated on its position that all Category A and B safety-related valves (including air-operated pressure and modulating flow control valves) should be stroke-timed. This test verifies the capability of a valve to perform its safety function as well as ensures that the valve hasn't degraded. In the Valve Test Programs for both Hatch units, Notes 6, 8, 9 and 10 reference subsection IWV-1200 of Section XI of the ASME Code as the basis for not stroke timing the following valves:

E11-F068 A & B
E11-F200 A thru D
E41-F035

E51-F105
E51-F109
P41-F208 A thru D

The NRC staff has been advised by the ASME that the exemption provided by IWV-1200 applies to valves that are used only for the purposes listed in this subsection. Please review your relief requests for the valves listed above and either verify that these valves never provide a safety function or else commit to stroke test any valve that may be safety-related.

Response

Further evaluation of the failure of these valves to perform their designated function is required. This evaluation is to be supplied to GPC by its architect-engineer by April 30, 1984. After review by GPC, the results of the evaluation will be transmitted to NRC.

4. Twelve air operated valves in each unit's Plant Water System (P41-F035 A & B, F036 A & B, F037 A & B, F039 A & B, F040 A & B, and F042 A & B) will be stroke-timed with a maximum time as the only acceptance criterion. We approve this alternative test if the maximum stroke time will accurately reflect degradation of the valve. Please provide the values of the maximum stroke times that will be used in testing these valves.

Response

The test procedures for these valves have not been implemented. They are scheduled for implementation prior to startup from the present or future planned maintenance/refueling outage. After implementation a baseline value will be established and furnished to the NRC.

5. Valves E21-F036 A & B - We agree with the basis that these containment isolation check valves cannot be verified to be closed and fulfilling their isolation function except during the integrated leak test. Please justify why disassembly of these valves on a periodic basis would not provide greater assurance of their operability, or commit to such an alternative test.

Response

This valve has been designated as an inboard containment isolation valve in the Appendix J program; therefore, it was included in the inservice testing program. As discussed in the relief request this valve is sealed from the primary containment because the test line terminates below water level and outboard of the valve is a seismic seal water system. Therefore, any leakage through the valve during a loss of coolant accident (LOCA) would not be released to the environment. The integrated leak rate test (ILRT) is considered to be adequate testing. Disassembly of this valve for inspection would not increase the level of safety and is not considered justifiable.

6. Valve E41-F111 - In the initial Valve Test Programs for Units 1 & 2 relief was requested for this valve from the leak rate test requirements of IWV-3420(c) of the 74S75 ASME Code. Why is the same relief (from the requirements of IWV-3423 of the 80W80 ASME Code) not requested in the revised Valve Test Programs?

Response

Relief Request 6.1.2 applies to valves E41-F111 and 2E41-F111.

7. Valve E51-F015 (sic) - Note 10 in the Unit 1 Valve Test Program states that the licensee considers this valve exempt from stroke timing (See Question 3 above) but the Program indicates that stroke timing will be performed. Please clarify. Also, please clarify why relief request 6.1.2 applies to this valve in the Unit 2 Valve Test Program and to valve E51-F104 in the Unit 1 Test Program.

Response

"Note 10" was an error and should read "Qtr". Relief Request 6.1.2 should apply to valves E51-F105 and 2E51-F105.

8. Valves 2P41-F339 A & B and 2P41-F340 in the Diesel Generator Cooling system are included in the Valve Testing Program for Unit 2 while the equivalent valves (P41-552 A, B, and C and P41-533 A, B, and C) are not included in the Unit 1 Program. Please justify this difference.

Response

Valves 2P41-F339 A & B and F340 are air-operated (AO) butterfly valves. P41-F552 A & C are normally open check valves and P41-F553 A & C are normally open manual butterfly valves. These Hatch Unit 1 valves are not required to close to meet a safety function.

C. VALVES - HATCH UNIT 2

1. Valves 2B21-F077 A & B - Note 13 of the Unit 2 Valve Testing Program states that closure of this (sic) Category AC valves will be verified quarterly by position indication lights. Please describe how these valves will be leak tested.

Response

Note 13 states that valves 2B21-F077 A & B will be closure tested each cold shutdown, but not more frequently than once per 3 months. A leak rate test is performed in which air is used to pressurize the water-filled test volume through 2B21-F082 A or B. The allowable leakage is limited by Appendix J requirements. This penetration along with several others is limited to a total leakage of .009 L_a.

2. Valve 2E11-F046 A thru D - Should the Note for this valve, on Sheet 10 of the Unit 2 Valve Testing Program, be Note 5 rather than Note 29?

Response

Note 5 is the correct note.

3. Valves 2P41-F339 A & B and F340. What are the maximum stroke times assigned to these valves?

Response

Please refer to the response to Question B.4.