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Power Generation Department

December 21, 1982

Director of Nuclear Reactor Regulation  
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  
AUTOMATIC SWITCHOVER OF REACTOR CORE  
ISOLATION COOLING SYSTEM SUCTION

Gentlemen:

By letter dated August 4, 1982, the NRC requested that Georgia Power Company verify the acceptance criteria delineated in the enclosure of the subject letter, concerning NUREG-0737, Item II.K.3.22. We hereby submit Enclosure 1 which indicates that, upon installation, the acceptance criteria will be satisfied. As stated in our letter of June 11, 1982, installation should be complete by September, 1983.

If you should require additional information in this regard, please contact this office,.

Very truly yours,

L. T. Guwa  
Chief Nuclear Engineer

CT/mb

Enclosure

xc: J. T. Beckham, Jr.  
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ENCLOSURE 1

Attachment to December 21, 1982 letter  
Acceptance Criteria of NUREG-0737, Item II.K.3.22

1. Criteria

Modifications to the Reactor Core Isolation Cooling (RCIC) System shall be designed, fabricated, erected and tested to the quality standards commensurate with the importance of the safety functions to be performed, i.e., RCIC modifications shall satisfy the same criteria used in the original RCIC design. Therefore, if the RCIC system is not a safety grade system, then the automatic switchover sensors and circuitry need not be safety grade. However, those portions of the system which were considered to be safety grade in the original licensing basis, such as containment isolation logic and circuitry, shall be safety grade. In addition, nonsafety grade logic and circuits shall be appropriately isolated from safety grade logic and circuits.

Comment

The RCIC system is not required to mitigate any accident condition, but has been designed and constructed to the same quality standards as other safety systems in the plant.

The design of the RCIC switchover addition calls for tapping into the existing HPCI level switch manifold piping and mounting new "Q" external float type level switches in parallel and to the same elevations as the existing HPCI switches.

The new RCIC level switches and associated circuitry will be designed and installed as Class 1E.

2. Criteria

Regardless of whether the RCIC system is a safety grade system or not, the automatic switchover sensors and circuitry should meet the criteria of IEEE Standard 279-1971 Section 4.9, "Capability for Sensor Checks," and 4.10, "Capability for Test and Calibration."

Comment

The sensors and circuitry will meet the criteria of IEEE Standard 279-1971, Section 4.9 "Capability for sensor checks" and 4.10 "Capability for test and calibration".

The new level switches will be adjustable from 1/2 inch to 3-1/2 inches. Sensor testing and checking may be accomplished by inducing a measured head of water into the isolated level switch manifold piping.

Attachment to December 21, 1982 letter  
Acceptance Criteria of NUREG-0737, Item II.K.3.22  
Page 2

3. Criteria

The capability of remote manual switchover (in addition to automatic switchover), the capability of remote manual RCIC flow termination, and the capability of remote manual containment isolation shall be retained.

Comment

Manual switchover, manual RCIC flow termination (pump control switch) and manual containment isolation will be retained.

4. Criteria

The automatic switchover sensors and circuitry shall be designed for and tested to meet the same seismic design criteria as was used for the RCIC system.

Comment

All RCIC circuits will be constructed to meet or exceed the proper seismic requirements.

The level switches being procured for the RCIC switchover will be seismically qualified based on a generic prototype test. The report has been compared and approved in accordance with the Hatch Project Required Response Spectra (RRS) and approved in accordance with IEEE Standard IEEE 344, 1975.

5. Criteria

The RCIC automatic switchover sensors and circuitry shall be environmentally qualified to the same criteria as was used for the RCIC system.

Comment

The RCIC automatic switchover circuitry will be designed and constructed with equivalent or better environmental considerations as are used for the RCIC System.

Being required only to maintain pressure boundary integrity, during an accident event, the sensors will be procured to the normal environmental requirements for the locations where they are installed.

6. Criteria

The logic for the switchover shall be such that the condensate storage tank suction valve is not closed until the suppression pool suction valves are fully open.

Comment

The logic for the switchover will be such that the condensate storage tank suction valve is not closed until the suppression pool suction valves are fully open.

7. Criteria

The design shall be such that no single failure within any equipment added to accomplish the automatic switchover of RCIC will interfere with operation of the HPCI system or interfere with the transfer of HPCI suction from the condensate storage tank to the suppression pool.

Comment

The circuits and equipment added to accomplish the RCIC auto switchover will be independent of the HPCI systems and equipment except as noted in comment #1 above. Electrically, the two systems are in different divisions. No single electrical failure of one system will affect the other.

8. Criteria

Bypassed and Inoperable Status Indication shall be provided in the control room for the automatic switchover channel(s) if such has been required for the RCIC system. In any case, the positions of the condensate storage tank suction valves and the suppression pool suction valves shall be indicated or be readily available in the control room.

Comment

Bypassed and inoperable status indication has not previously been required for the RCIC system and will not be provided for the added auto switchover.

Positions of the condensate storage tank suction valves and suppression pool suction valves are indicated in the main control room.

9. Criteria

If the sensors and/or associated sensing lines are located in an area where they can be exposed to cold weather, heating and ventilation or heat tracing shall be provided to prevent freezing of the sensors and/or associated sensing lines.

Comment

Heat tracing will be applied to RCIC switchover sensors and sensing lines at the condensate tanks for both Units 1 and 2 where the potential exists for freezing due to exposure to cold weather.

10. Criteria

Emergency procedures should be provided to alert the plant operators to take corrective action prior to overfilling the suppression pool.

Comment

Emergency procedures do exist to alert plant operators to take corrective action prior to overfilling the suppression pool.