HELPING BUILD ARKANSAS

ARKANSAS POWER & LIGHT COMPANY

October 20, 1972

Mr. Angelo Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Subject: Arkansas Power & Light Company
Arkansas Nuclear One-Unit 1
Docket No. 50-313
Flooding of Safety Related Equipment

Gentlemen:

This letter is in response to Mr. DeYoung's letter of September 26, 1972, which requested that Arkansas Power & Light Company review the design of Arkansas Nuclear One-Unit 1 to determine any adverse affects on safety related equipment which might result from the failure of non-Category I (seismic) equipment, particularly in the circulating water system and fire protection system.

The criteria for the design and construction of Arkansas Nuclear One-Unit 1 was that the failure of any non-Category I (seismic) equipment, including the circulating water system and fire protection system, would not adversely affect the performance of safety related equipment required for safe shutdown of the facility or to limit the consequence of an accident. Safety related equipment in the turbine building is limited to waterproof cable. Safety related equipment in the auxiliary building is protected against external flooding up to a minimum of three feet above the level of wave action of the probable maximum flood. In the case of a rupture in the circulating water system, there would be no flooding in the auxiliary building because water would leak out of the non-watertight turbine building before reaching the probable maximum flood elevation.

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With the exception of the reactor building, diesel generator room, electrical penetration areas, diesel fuel storage tank vaults and cable spreading room, fire protection system sprinklers and piping are located only in areas where there is no safety related equipment.

In these areas, except the cable spreading room, the valves controlling the sprinkler systems are of the type that will open on a manual signal from the control room to preclude accidental flooding of these rooms. All of the cable and terminal boxes in the cable spreading room are waterproof.

The fire pumps and accessories are located in the Class I portion of the intake structure. A drain is installed in the structure to prevent flooding due to pipe rupture. The fire pumps are separated from the service water pumps by a Class I wall. The fire protection system piping is physically separated from critical systems to preclude damage to these systems.

Implementation of the above criteria is assured by the many design review checks performed during the engineering and design phases of plant construction. In addition, during construction the Quality Assurance personnel are checking to insure that there is no relaxation of these criteria.

Very truly yours,

J. D. Phillips
Vice President and
Chief Engineer

JDP:lt