



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Jra

October 24, 1980

Docket No. 50-310

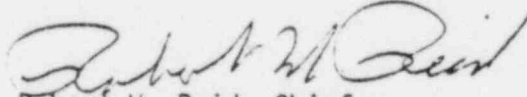
Mr. William Cavanaugh, III
Vice President, Generation
and Construction
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Dear Mr. Cavanaugh:

On May 29, 1980, the Commission published a proposed rule, a new paragraph 50.48 and Appendix R to 10 CFR Part 50, concerning fire protection, which sets forth the minimum acceptable fire protection requirements necessary to resolve contested areas of concern for nuclear power plants operating prior to January 1, 1979.

We have reviewed all the information you have provided to date regarding your fire protection program. Several of the open items indicated in our Safety Evaluation Report issued August 22, 1978, remain unresolved. The enclosure presents our position on modifications that would have to be made at your facility to resolve these open items, in a manner that would meet the requirements of the proposed Appendix R.

Sincerely,


Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosure:
Summary of Staff
Requirements

cc w/enclosure:
See next page

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Arkansas Power & Light Company

cc w/enclosure(s):

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Little Rock, Arkansas 72201

SUMMARY OF STAFF
REQUIREMENTS TO RESOLVE OPEN ITEMS

Enclosure

ARKANSAS NUCLEAR ONE - UNIT 1
DOCKET NO. 50-313

3.2 Separation of Power Cables in Manholes

In the SER, it was our concern that an unsuppressed fire in the yard area manholes could affect redundant service water pump power cables. The licensee has not provided the necessary information for our review.

The redundant service water pump cables are located in open trays within the manholes separated vertically by about twelve inches with no barriers. Manual fire suppression would not be adequate to prevent involvement of redundant service water pump power cables in the event of a fire.

The licensee has indicated that a description of a proposed barrier system for the cables in the manholes will be submitted during the week of October 19, 1980. Also, the proposed system would be installed at the first shutdown which would permit the installation but not later than the next refueling outage. If the proposed barrier system is not found acceptable by the schedule established in the new §50.48 of 10 CFR 50, then the licensee will be subject to the requirements of Appendix R to 10 CFR 50.

To meet Section III, Paragraph G of the proposed Appendix R to 10 CFR Part 50, the licensee should provide an alternate shutdown capability independent of this area. The alternate shutdown system should meet the requirements of Section L, Paragraph III of proposed Appendix R to 10 CFR Part 50.

3.7 Protection of Cable Spreading Room (CSR) Cables

In the SER, it was our concern that an unmitigated fire in the CSR could become large enough to affect cables from both redundant divisions.

By letter dated March 13, 1980, the licensee stated that the existing CSR deluge water spray system and detection system are adequate to assure that a fire can be detected and suppressed without jeopardizing the capability to safely shutdown the plant. We informed the licensee that the fire protection provided for the CSR was not acceptable.

The licensee has only considered a fire involving shorted electrical cable. In the event of a transient exposure fire the fire suppression system may not extinguish the fire before the loss of redundant divisions of safe shutdown cables.

The licensee has not demonstrated that adequate protection features have been provided for cables and equipment of redundant systems important to achieving safe shutdown conditions to ensure that at least one means of achieving such conditions survives postulated fires.

To meet our fire protection guidelines, alternate shutdown capability should be provided when safe shutdown cannot be ensured by barriers and detection and suppression systems because of the exposure of redundant safe shutdown equipment, cabling, or components in a single fire area, to an exposure fire, or fire suppression activities, or rupture or inadequate operation of fire suppression systems.

To meet Section III, Paragraph G of the proposed Appendix R to 10 CFR Part 50, the licensee should provide an alternate shutdown capability independent of this area. The alternate shutdown system should meet the requirements of Section I, Paragraph III of proposed Appendix R to 10 CFR Part 50.

3.16 Associated Circuits

In the SER, it was our concern that a fire involving associated circuits may affect operation of safe shutdown equipment.

By letter dated October 2, 1980, the licensee provided information regarding the effect of fires involving associated circuits. If this information is not found acceptable under current acceptance criteria before the schedule established in 10 CFR 50.48, the licensee will be subject to the requirements of Appendix R to 10 CFR 50.

To meet Section III, Paragraph L of the proposed Appendix R to 10 CFR Part 50, the safe shutdown equipment and systems for each fire area should be isolated from associated non-safe shutdown circuits in the fire area so that hot shorts, open circuits, or shorts to ground in the associated circuits will not prevent operation of the safe shutdown equipment. The separation and barriers between trays and conduits containing associated circuits of one safe shutdown division and trays and conduits containing associated circuits or safe shutdown cables from the redundant division shall be such that a postulated fire involving associated circuits will not prevent safe shutdown.