



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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Docket Nos. 50-313
and 50-368

November 20, 1972

Arkansas Power and Light Company
ATTN: Mr. J. D. Phillips
Vice President &
Chief Engineer
Sixth and Pine Streets
Pine Bluff, Arkansas 71601

RE: Arkansas Nuclear One - Units 1 and 2
Gentlemen:

The Commission's Regulatory Staff has completed a review of fuel densification and its effect on reactor operation including transients and postulated loss-of-coolant accidents. The Staff's investigations and conclusions are reported in "Technical Report on Densification of Light Water Reactor Fuels" dated November 14, 1972, a copy of which is enclosed for your information and guidance. This report concludes that densification of fuel may occur and that the resulting formation of fuel column gaps should be anticipated in all light water reactor fuels. The report also provides the essential elements to be included in calculational models used to account for the effects of fuel densification.

The Regulatory Staff believes that the fuel for the subject facility(s) is susceptible to densification. Therefore, we request that you provide the necessary analyses and other relevant data for determining the consequences of densification and the effects on normal operation, anticipated transients, and accidents, including the postulated loss-of-coolant accident, using the guidance provided in the enclosed report. If the analyses indicate that changes in design or operating conditions are necessary to maintain required margins, you should submit proposed changes and operating limitations with the analyses.

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In order that the Regulatory Staff can conduct an expeditious and orderly review of these matters, we request that you submit the analyses and additional information within 45 days from the date of this letter.

It is requested that this information be provided with one signed original and thirty-nine additional copies. If your submittal is for more than one unit, a total of sixty copies is needed.

Sincerely,

A Giambusso

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Enclosure:
Technical Report on Densification
(November 14, 1972)

cc: Horace Jewell, Esquire
House, Holms & Jewell
1550 Tower Building
Little Rock, Arkansas 72201

Mrs. Robert Keathly, Librarian
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