

27 # 01

NOV 1 1972

Docket No. 50-313

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

Dear Mr. Phillips:

Your response to our Information Request No. 9.1 indicated that no device is being provided to close automatically the motor-operated isolation valves in the suction lines of the Decay Heat Removal System (DHRS) when reactor coolant pressure exceeds a selected fraction of the design pressure of the DHRS. You have proposed a DHRS high pressure alarm to alert the operator should the valves be left open when raising RC pressure. You have contended that the rate of pressure increase which is possible is sufficiently low that the operator can react in time to protect the DHRS.

We have evaluated your proposed alarm scheme and do not regard it as providing a degree of protection equivalent to an automatic closure system. First, and more importantly, the alarm would not warn of a condition where the root valve (RC side) is closed and the other valve open. This single valve isolation possibility makes the plant vulnerable to a grievous failure if the plant reaches power and that single valve fails. Secondly, analysis presented for another plant of this type indicates the potential, during pressure increasing transients, for reaching an overpressure condition in less than 10 minutes unless correct operator action is taken.

Consequently, the proposed alarm scheme is not regarded as providing a degree of protection equivalent to an automatic closure system. Please indicate your plans and schedule to modify the design of the DHRS valving to include the preferred automatic closure feature or to conform to other criteria that provide an equivalent degree of protection. In addition, the interlocks provided to prevent valve opening at high pressure should be independent and diverse. Both the valve automatic closure and

OFFICE ▶						
SURNAME ▶				8004180705	A	LB
DATE ▶						

Mr. J. D. Phillips

- 2 -

NOV 1 1972

prevention-from-opening systems should comply with all the requirements (not merely the intent) of IEEE-279.

Sincerely,

Original signed by
R. C. DeYoung
R. C. DeYoung, Assistant Director
for Pressurized Water Reactors
Directorate of Licensing

cc w/encl:
Hornes Jewell, Esq.
Hornes, Holms & Jewell
1550 Tower Building
Little Rock, Arkansas 72201

DISTRIBUTION:

AEC PDR
Local PDR
Docket
RP Reading
PWR-4 Reading
SHHanauer
RSBoyd
RCDeYoung
DSkovholt
FSchroeder
RTedesco
RRMaccary
DKnuth
HDenton
PWR Branch Chiefs
RWKlecker
OGC
RO (3)
RMBernero
EGoulbourne
VMoore

C R E S S	L:PWR-4	L:PWR-4	L:EI&CS	L:PWR		
3093, 13-14	<i>RAB</i>	<i>AS</i>	<i>FR/VM</i>	<i>RCDeYoung</i>		
10-31-72	RBernero:bv	ASchwencer	VMoore	RCDeYoung		
SURNAME ▶						
DATE ▶	11/1/72	11/1/72	11/1/72	11/1/72		