



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
November 27, 1989

Docket No. 50-368

Mr. T. Gene Campbell  
Vice President, Nuclear  
Arkansas Power and Light Company  
P. O. Box 551  
Little Rock, Arkansas 72203

Dear Mr. Campbell:

SUBJECT: RELIEF REQUEST- CLASS 2 SYSTEM PRESSURE TESTING FOR  
ARKANSAS NUCLEAR ONE, UNIT 2 (ANO-2) (TAC NO. 75058)

The staff has reviewed Arkansas Power and Light Company's (AP&L's) request for relief from certain ASME Code requirements for Class 2 Pressure Testing dated October 6, 1989. Specifically, the request addressed the hydrostatic test performed on the ANO-2 main steam system on September 25 and 26, 1989.

In accordance with the Technical Specifications, a secondary hydrostatic test was to be performed using steam instead of water at a pressure 1.05 times the design pressure of the main steam system (1085 psig) at a temperature in excess of 500°F. The test would be run with eight of the ten code safety valves gagged such that the desired pressure could be maintained for the required four hour holding time.

As indicated in your letter, attempts to maintain the desired pressure of 1160 psig (1.05 times design pressure plus 1% instrument tolerance) were not successful. However, a maximum pressure of 1140 psig was maintained at a temperature of about 565°F for a four hour period due to safety valve leakage and the potential for damaging these valves at a higher pressure. Assuming a more realistic 0.5% instrument error, AP&L estimates that the actual pressure achieved was 1130 psig.

Considering the test temperature versus pressure data included in a table in ASME Code, Section XI, IWC-5220(b), AP&L maintains that it performed the secondary system hydrostatic test at approximately 1.04 times the system design pressure rather than the 1.05 value required for a temperature of 500°F indicated in the Code table. (This table starts at 100°F. and ends at 500°F.) Nevertheless, AP&L suggests that the pressure-temperature correlation may exist at temperatures in excess of 500°F, and that at 565°F the corresponding pressure requirement would be about 1.02 times design pressure; and therefore, the test results could be considered acceptable.

Given the extrapolation of the Code data, AP&L contends that the recent test met the intent of the Code to challenge the system integrity at pressure stresses greater than design and operation pressure. In addition, system walkdowns did not identify any structural integrity leakage. Based on this information, AP&L requested that NRC grant relief from Article IWC-5000 of Section XI of the ASME Code to accept the September 25 and 26, 1989 test as the first 10-year hydrostatic test of the secondary system for ANO-2.

8912010160 891127  
PDR ADOCK 05000368  
P PIC

DFol  
1/1

The staff has evaluated the information included in your letter as well as specific testing requirements included in the ASME Code, and has concurred with AP&L's determination that the difference between the pressure attained and the required pressure as per the ASME Code is an acceptable deviation from requirements for the near term and agrees that the results did not necessitate repeating the test during the refueling outage of ANO-2.

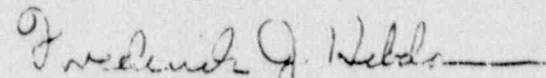
We have considered your request for relief from having to repeat the test during this 10 year period and have determined that granting relief is not appropriate in this instance. The Commission grants relief in accordance with 10 CFR 50.55(a) in those cases where the licensee proposes alternatives to testing requirements, where compliance with the ASME Code requirements would result in a hardship or unusual difficulties without a compensating increase in the level of quality and safety, or where requirements are considered impractical. The staff considers that the failure to achieve the required results in the pressure testing of a system is not the basis for granting relief and that the specific test pressure listed in the Code still needs to be achieved.

However, the margin of "success" achieved in the ANO-2 secondary system hydrostatic test provides sufficient justification for granting a schedular extension to the end of the first ten year testing period. Accordingly, AP&L should repeat the test not later than the end of the next regularly scheduled refueling outage (2R8). This one time granting of schedular extension does not effect the end date of the subsequent ten year period, i.e. the next period would end on March 26, 2000.

Please provide within 60 days of receipt of this letter, your schedule for completion of the secondary system hydrostatic test in accordance with the above extension.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-11.

Sincerely,



Frederick J. Heddon, Director  
Project Directorate IV  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

cc: See next page



Mr. T. Gene Campbell  
Arkansas Power & Light Company

Arkansas Nuclear One, Unit 2

cc:

Mr. Early Ewing, General Manager  
Technical Support and Assessment  
Arkansas Nuclear One  
P. O. Box 608  
Russellville, Arkansas 72801

Mr. Charles B. Brinkman, Manager  
Washington Nuclear Operations  
Combustion Engineering, Inc.  
12300 Twinbrook Parkway, Suite 330  
Rockville, Maryland 20852

Mr. Niel Carris, Director  
Nuclear Operations  
Arkansas Nuclear One  
P. O. Box 608  
Russellville, Arkansas 72801

Honorable Joe W. Phillips  
County Judge of Pope County  
Pope County Courthouse  
Russellville, Arkansas 72801

Mr. Nicholas S. Reynolds  
Bishop, Cook, Percell & Reynolds  
1400 L Street, N.W.  
Washington, D.C. 20005-3502

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
Office of Executive Director for  
Operations  
611 Pyar Plaza Drive, Suite 1000  
Arlington, Texas 76011

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
1 Nuclear Plant Road  
Russellville, Arkansas 72801

Ms. Greta Dicus, Director  
Division of Environmental Health  
Protection  
Arkansas Department of Health  
4815 West Markam Street  
Little Rock, Arkansas 72201

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
1700 Rockville Pike, Suite 525  
Rockville, Maryland 20852

Mr. T. Gene Campbell

- 2 -

The staff has evaluated the information included in your letter as well as specific testing requirements included in the ASME Code, and has concurred with AP&L's determination that the difference between the pressure attained and the required pressure as per the ASME Code is an acceptable deviation from requirements for the near term and agrees that the results did not necessitate repeating the test during the refueling outage of ANO-2.

We have considered your request for relief from repeating the test for the final 10 year period and have determined that it is not appropriate in this instance. The Commission grants relief in accordance with 10 CFR 50.55(a) in those cases where the licensee proposes alternatives to testing requirements, where compliance with the ASME Code requirements would result in a hardship or unusual difficulties without a compensating increase in the level of quality and safety, or where requirements are considered impractical. The staff considers that the failure to achieve the required results in the pressure testing of a system is not the basis for granting relief and that the specific test pressure listed in the Code still needs to be achieved.

However, the margin of "success" achieved in the ANO-2 secondary system hydrostatic test provides sufficient justification for granting a schedular extension to the end of the first ten year testing period. Accordingly, AP&L should repeat the test not later than the end of the next regularly scheduled refueling outage (2R8). This one time granting of schedular extension does not effect the end date of the subsequent ten year period, i.e. the next period would end on March 26, 2000.

Please provide within 60 days of receipt of this letter, your schedule for completion of the secondary system hydrostatic test in accordance with the above extension.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-11.

Sincerely,  
Original Signed By  
Frederick J. Hebdon  
Frederick J. Hebdon, Director  
Project Directorate IV  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

cc: See next page

DISTRIBUTION

~~Socket File~~

G. Holahan  
OGC-Rockville  
ACRS (10)

NRC PDR  
ADR4  
C. Poslusny  
PD4 Plant File

Local PDR  
F. Hebdon  
E. Jordan  
C. Y. Cheng

PD4 Reading  
P. Noonan

\*SEE PREVIOUS CONCURRENCES:

OFC	: *PD4/LA	: *PD4/PM	: *MTB	: *OGC	: PD4/D	:	:
NAME	: PNoonan	: CPoslusny	: bj	: CYCheng	: MYoung	: FHebdon	:
DATE	: 10/30/89	: 11/07/89	: 11/09/89	: 11/20/89	: 11/27/89	:	: