

MAR 18 1982

*Docket File*

*DCS MS-016*

Docket No. 50-285

Mr. W. C. Jones  
Division Manager, Production  
Operations  
Omaha Public Power District  
1623 Harney Street  
Omaha, Nebraska 68102



Dear Mr. Jones:

SUBJECT: RTD RESPONSE TIME DETERMINATION FOR THE FORT CALHOUN STATION,  
UNIT NO. 1.

By letters dated April 25, 1978 and August 29, 1979 Florida power and Light Company and Northeast Nuclear Energy Company provided technical reports on two different Loop Current Step Response (LCSR) methods for determining the resistance temperature detector (RTD) response time at St. Lucie, Unit No. 1 and Millstone, Unit No. 2, respectively. These methods are similar in most respects, but have a few differences which are discussed in the enclosed NUREG-0809. Based on our review of both reference reports, we find the LCSR methods to determine RTD time response as described in each report and documented in the NUREG to be acceptable.

Extensive testing has shown the LCSR method to be extremely reliable and provide results with an accuracy of 10% (maximum error). This compares very favorably with the older plunge test method, which often has inaccuracies as high as a factor of 3. It appears to us that use of the LCSR method would also result in reduction in personnel radiation exposure.

The RTD time response testing which has been done in conjunction with the development of the LCSR method has indicated that the RTDs in operating reactors suffer time response degradation as they age. Current Standard Technical Specifications (STS) require that one quarter of the safety system RTDs be tested each 18 months. This corresponds to testing each RTD once every six years. In view of the potential RTD time response degradation observed in our study, it is likely that the present STS surveillance testing schedule for RTDs is not adequate.

A review of the Ft. Calhoun TS shows no requirements for RTD response time testing. We believe you should evaluate this condition as it relates to your responsibility for safe operations.

OFFICE							
SURNAME							
8204010240	820318						
PDR ADOCK	05000285						
P	PDR						

NUREG-0809 recommended Postion 5 (Pages 29 to 31) is to either (1) perform the safety channel RTD surveillance testing to determine the response time of all RTDs at least once every 18 months; or (2) assure the RTD response time used in the safety analysis is as given in the table on Page 30 of the NUREG. The choice of Option 1 would result in a significant increase in the data available, both from LCSR and other methods (plunge test for example), to determine if RTD response times are subject to degradation as installed at your facility. Such data collection and evaluation might be coordinated through EPRI. The NRC, of course, will remain interested in the outcome of such a program. Any degradation of RTD response time values outside the values used in the safety analysis of record would be reportable in accordance with the TS reporting requirements (section 5.9.2).

NUREG-0809 is provided as an early notification of a possibly significant matter. It is expected that you will review the information for possible applicability to your facility. No specific action or response is requested at this time. If NRC evaluations so indicate, further licensee actions may be requested or required. If you have questions regarding this subject, please contact your assigned NRC project manager.

Sincerely,  
Original signed by  
Robert A. Clark

Robert A. Clark, Chief  
Operating Reactors, Branch #3  
Division Licensing

Enclosure:  
NUREG-0809

cc: See next page

DISTRIBUTION  
Docket File  
Local PDR  
ORB Rdg  
D.Eisenhut  
JHeltemes  
RAClark  
PKreutzer-3  
OELD  
NSIC  
I&E (1)  
ACRS (10)  
ETourigny  
Gray File

OFFICE ▶	DL:ORB#3	DL:ORB#3	DL:ORB#3	DL:ORB#3			
SURNAME ▶	PKreutzer	ETourigny/dd	EConner	RAClark			
DATE ▶	3/11/82	3/18/82	3/18/82	3/18/82			

Omaha Public Power District

cc:

Marilyn T. Shaw, Esq.  
LeBoeuf, Lamb, Leiby & MacRae  
1333 New Hampshire Avenue, N.W.  
Washington, D. C. 20036

Mr. Jack Jensen  
Chairman, Washington County  
Board of Supervisors  
Blair, Nebraska 68023

U.S. Environmental Protection Agency  
Region VII  
ATTN: Regional Radiation  
Representative  
324 East 11th Street  
Kansas City, Missouri 64106

Mr. Frank Gibson  
W. Dale Clark Library  
215 South 15th Street  
Omaha, Nebraska 68102

Alan H. Kirshen, Esq.  
Fellman, Ramsey & Kirshen  
1166 Woodmen Tower  
Omaha, Nebraska 68102

Mr. Larry Yandell  
U.S.N.R.C. Resident Inspector  
P. O. Box 309  
Fort Calhoun, Nebraska 68023

Mr. Charles B. Brinkman  
Manager - Washington Nuclear  
Operations  
C-E Power Systems  
Combustion Engineering, Inc.  
4853 Cordell Avenue, Suite A-1  
Bethesda, Maryland 20014

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