



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

*Phil Polk*

APR 25 1980

MEMORANDUM FOR: Thomas A. Ippolito, Chief, Operating Reactors Branch  
#3, Division of Operating Reactors

FROM: G. Lainas, Chief, Plant Systems Branch, Division  
of Operating Reactors

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON ADEQUACY OF  
STATION ELECTRIC DISTRIBUTION SYSTEM VOLTAGES  
(TAC 13156)

Plant Name: Fitzpatrick  
Docket No.: 50-333  
Responsible Branch: ORB#3  
Project Manager: P. Polk  
Reviewing Branch: Plant Systems  
Status: Awaiting Information.

In response to Technical Assistance Request TAC 13156, the Plant Systems Branch has reviewed the licensee's submittal of September 7, 1979, and found that additional information is required in order to complete our review.

The enclosed request for additional information should be forwarded to the licensee as soon as possible with a request for response within 45 days.

G. Lainas, Chief  
Plant Systems Branch  
Division of Operating Reactors

Contact:  
I. Ahmed, X27174

Enclosure:  
Request for Additional  
Information

cc w/enclosure:  
D. Eisenhut P. Polk  
G. Lainas M. Chiramal  
D. Tondi I. Ahmed  
P. Shemanski

8005210019

REQUEST FOR ADDITIONAL INFORMATION REGARDING THE  
ADEQUACY OF STATION ELECTRIC DISTRIBUTION SYSTEMS VOLTAGES

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

References:

1. G.T. Berry, "Evaluation of Operability of Safety-Related Equipment During a Degraded Voltage Condition," October 18, 1976.
2. W. Gammill, "Adequacy of Station Electric Distribution Systems Voltages," August 8, 1979.
3. P.J. Early, "Adequacy of Station Electric Distribution Systems Voltages," September 7, 1979.

Reference 3 refers to previous correspondence regarding degraded grid voltage protection. The information provided therein did not answer all the concerns of Reference 2. Of specific concern are the following:

1. Guideline 6<sup>2</sup> requests that the voltage should be calculated at the terminals of each safety load. Your previous analysis<sup>1</sup> only shows bus voltages. Please provide safety load terminal voltages in accordance with Guideline 6.
2. As per Guideline 3<sup>2</sup>, please provide safety loads terminal voltage for starting of the largest non-safety load concurrent with fully-loaded Class 1E buses and the offsite grid voltage at its minimum value.
3. Reference 2 states that, "The adequacy of the onsite distribution of power from the offsite circuits shall be verified by test to assure that analysis results are valid. Please provide (a) a description of the method for performing this verification and (b) the test results.

4. Your previous analysis indicates that you have two independent offsite sources for normal and emergency power; NSS Transformer T2 and NSS Transformer T3. However, Figure 8.2-1 in the FSAR indicates that there may be several possible cross-ties of the redundant trains which would allow one transformer to supply loads on both trains. Please provide either safety load terminal voltages for one NSS transformer supplying both trains, or include limiting conditions of operation (LCOs) in plant technical specifications to prevent any cross-tie of the redundant trains during operation.