

central file

Iowa Electric Light and Power Company

October 11, 1979
LDR-79-235

LARRY D. ROOT
ASSISTANT VICE PRESIDENT
NUCLEAR GENERATION

50-331

Mr. James G. Keppler, Director
Office of Inspection and Enforcement
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

With regard to our anchor bolt testing and replacement program related to IE Bulletin No. 79-02, we have reevaluated our original position and have determined that it is not necessary or cost-beneficial to proceed with a 100% change-out program. We have discussed this matter with Mr. Gallagher of your staff and it is our understanding that this approach is acceptable with Region III personnel.

Please find enclosed a revision to the last page of our response from Mr. L. Root to Mr. J. Keppler dated July 11, 1979, which modifies our replacement program.

We would be pleased to discuss this further with you if you desire.

Very truly yours,

Larry D. Root

Larry D. Root
Assistant Vice President
Nuclear Generation

LDR/RFS/mz
Enclosure

cc: R. Salmon
D. Arnold
S. Tuthill
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T. Kevern (NRC)
File: A101a, BN 79-02

U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, D.C. 20555

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4. Response (Continued)

The torque values used in the field verification program were developed from the empirical equation:

$$M+ = KPD$$

where

M+ = torque value (in lbs)

K = frictional coefficient

P = bolt tension (lb)

D = bolt diameter (in)

The frictional coefficient is attached by many factors - any typically varies between 0.2 to 0.3. Minimum values were used to yield tension values in the test program of not less than 25% of the ultimate tensile capacity of the expansion anchor.

Small piping design for seismic loads for the DAEC utilized the rigid range method of analysis. This is a chart analysis method that yields results which can be shown to be highly conservative.

A random sample test program is being developed by Iowa Electric which will be conducted in parallel with the program for correction of deficiencies in the large pipe supports to determine the basis for the as-installed condition of small piping at the DAEC.

Our testing program is continuing, and any results will be factored into our continuing evaluations. It is our intent to change out all anchor bolts, which are found installed with uncorrectable deficiencies with wedge type anchor bolts. We will keep you advised of our schedule and plans.