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# INDIANA & MICHIGAN POWER COMPANY

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NEW YORK, N. Y. 10004

September 19, 1979  
AEP:NRC:00162H

Donald C. Cook Nuclear Plant Units 1 and 2  
Docket Nos. 50-315 and 50-316  
License Nos. DPR-58 and DPR-74

Mr. J. G. Keppler, Director  
U.S. Nuclear Regulatory Commission, Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

- Reference:
- (1) IE Bulletin 79-02  
Pipe Support Base Plate Designs Using Concrete  
Expansion Anchor Bolts, Dated 3/8/79;  
Revision 1, Dated 6/21/79
  - (2) Submittal No. AEP:NRC:00162, Dated July 11, 1979
  - (3) Submittal No. AEP:NRC:00162G, Dated August 12, 1979

Dear Mr. Keppler:

This letter represents an update of the work being performed in response to the above referenced IE Bulletin.

Anchor Bolt Testing:

Field testing of the anchor bolts in the Auxiliary and Turbine Buildings of Unit 2 is now complete and most of the failed bolts have been repaired and/or replaced. We have tested 100% of the accessible bolts in those areas, the inaccessible ones being approximately 1%. The failure rate encountered during testing has been approximately 14%. Our Submittal No. AEP:NRC:00162 described the results of the Unit 1 and inside Unit 2 containment testing. We consider the testing program completed.

Analysis:

We are a member of the utility group for the Teledyne Generic Program. Teledyne Engineering Services (TES) has completed the Generic Program and the final report(\*) was submitted by Teledyne to the NRC headquarters and to all four regional offices on September 7, 1979.

(\*) Report No. TR-3501-1, Revision 1, dated 8/30/79

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The Generic Program addresses the following items of the Bulletin:

- a) The effect of cyclic loading on the anchor bolts. The report concludes that concrete anchor bolts that are not preloaded do not deteriorate when subjected to cyclic loading.
- b) Actual design curves for shear-tension interaction. The report concludes that linear interpolation for shear-tension interaction is highly conservative.
- c) Effect of base plate flexibility on the anchor bolt loadings. The report concludes that plate flexibility should be taken into account in determining the load on concrete expansion anchor bolts.
- d) Safety factors on the various anchor bolt designs are as given in the bulletin. The report concludes that testing results do not indicate a reason for applying different safety factors to different types of expansion anchors.

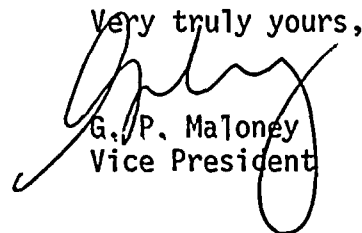
Specific analyses of base plates installed at the Cook Plant are being performed by Teledyne Engineering Services. The following information is being taken into consideration in the plant specific analyses:

- a) The field testing results to incorporate the as-built condition of the anchor bolts.
- b) Results of the Generic Program.

It is anticipated that the plant specific analyses and any required re-design of the pipe supports will be completed for both Units by October 31, 1979.

We will be submitting to your office updates on the developments of the steps described in Attachment (5) of Reference (2).

Very truly yours,



G. P. Maloney  
Vice President

GPM:em

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