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January 8, 1985

MURRAY R. EDELMAN

VICE PRESIDENT

NUCLEAR

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

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RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Air Handling Units
[RDC 113(84)]

Dear Mr. Keppler:

This letter serves as to amend our final report which was filed on October 11, 1984. That report concerned a discrepancy with seismic equipment qualification data for Units I and II Air Handling Units which were fabricated and supplied under Procurement Specification SP-646 by Carrier Corporation. A total of twelve Air Handling Units were supplied, seven for Unit I and Common and five for Unit II which were considered subject to this deficiency. Mr. J. W. McCormick-Barger of your office was originally notified on September 11, 1984, by Mr. P. P. Martin of The Cleveland Electric Illuminating Company (CEI) that this problem was being evaluated.

This report contains a description of the deficiency, an analysis of safety implications, and the corrective action taken. As a result of the additional analysis discussed below, it has been determined that this condition is not reportable pursuant to 10CFR50.55(e).

Description of Deficiency

During preoperational testing of one of the Air Handling Units, fan vibration problems were encountered. A field test to determine natural frequency was conducted in both the operating and static mode. Results of this test indicated natural frequencies at both the motor and fan within the range of 15 to 28 Hz. The natural frequencies found during this test were in conflict with the qualification report for the units, which indicated rigidity out to approximately 42 Hz.

The proposed corrective action, as stated in the October 11, 1984, report involved reinforcement of the units to increase their natural frequency to a value greater than 33 Hz. One unit was modified by adding reinforcement which corrected the vibration problem; however, the additional reinforcement did not

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significantly raise its natural frequency. It was decided, therefore, to investigate the adequacy of design of the as-built units at lower frequencies and correspondingly higher accelerations.

Analysis of Safety Implication

An analysis was performed by the Architect/Engineer of the units to resubstantiate the seismic qualifications of the units at lower frequencies. The analysis was reviewed on site and found to be acceptable. Based on the analysis report, CEI considers the AHU's qualified without any modifications.

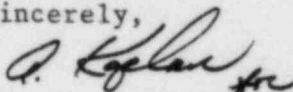
The approach used in the analysis follows IEEE 344-1975 and R. G. 1.100. Peak accelerations, taken from the appropriate floor response spectra, covering both the measured and calculated frequencies and increased by a conservative factor, were used to calculate stresses and deflections of various components within the AHU's and compared to allowable values. The analysis performed on the unmodified units also addresses the modified unit by showing that the reinforcement reduces stresses and deflections even further.

Corrective Action

Based on the acceptance of the units by analysis for use at the lower frequencies, no further action is required. Nonconformance Reports TAS 087 and TAS 088 have been closed out based on the above analysis.

Please call if there are any questions.

Sincerely,



Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. J. A. Grobe
USNRC, Site Office (SBB50)

Mr. D. E. Keating
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